Fly Tying Tips and Tricks

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As mentioned elsewhere on this site¹, in April of 2004 I authored an article on tying better dry flies for *California Fly Fisher* Magazine. The text of that article can be viewed here. I am preparing a similar article on tying better nymph patterns for a future issue of *California Fly Fisher* [this article has yet to be located — Ed.] In future additions to this part of the web site, I intend to discuss helpful tricks for emergers, steelhead and salmon flies, shad flies, bass flies, hair bugs, and others. For some of these I will seek the assistance of accomplished tyers in which case the text will be clearly attributed to them.

Set out below are a lot of tips, tricks, and techniques that I have learned from experience, books, and mostly from other tiers over the years. The text is mostly in outline form in order to keep it simple and short, and because I use the outline format in my classes. Most of the hints are, of course, not original thinking on my part. Rather, they are a compilation of other tyers' techniques that I have found helpful.

If you think about it, what this and a whole lot of the available literature is about is how to most efficiently manipulate the natural and artificial materials that we use when we crank bugs. So let's be manipulative and dive right into it.

First, a Few Definitions.

Before beginning, I need to define a few terms that are used repeatedly in the text below. Here they are:

- Shank. This term means the portion of the hook that is in back of the eye, extending back to the
 point on the hook where it begins to bend. Most of the time this point is just above the barb of the
 hook.
- Tail Tie-in Point. This is the spot on the shank of the hook that is directly above the back end of the barb of the hook. Most dry and nymph tails are tied in at this point, but there are a lot of exceptions.
- Wing Tie-in Point. This term is for dry flies, and refers to an imaginary line on the shank that is 1/3 of the length of the shank behind the hook eye.
- Sweet Spot. Most rooster neck hackle will have some webby material next to the stem. The sweet spot is the point along the stem where the webby material ends. It will be visible when the feather is held up to the light.

¹ Bill is referring to his own website which went dark late 2013 following his passing in January of that year. — Ed.

Dry Flies

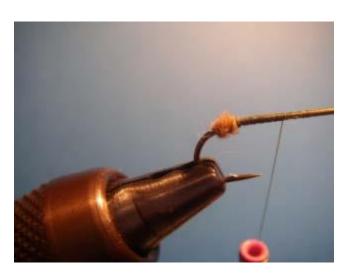
This summary is not intended to be a comprehensive treatment of dry fly technique. For a more in-depth presentation, see my article "Tricks, Tips and Techniques for Fish-Fooling Dry Flies" in the *California Fly Fisher* April 2004 issue, also located on the GBF website here.

I. Tails for dry flies.

- A. Mounting: Use "45-degree technique" to mount the tail to the hook. To do this, place the material on the close side of the hook at a 45 degree angle to the hook, butts of the material facing down. Take one loose wrap around the material at the exact mounting spot, then take a second, slightly tighter wrap. Bring the bobbin up for the third wrap, and at the same time pull upward with the bobbin. This will rotate the butts of the material to the top of the hook. Hold the material there firmly with your left hand and complete the third turn, making it tight. Wrap the butts down while still tightly holding the tips in your left hand. Now the tail material should be well secured squarely on top of the hook.
- B. Placement: Mount the tail just above the back end of the barb, or where the barb would be if you are using a barbless hook. This is a general rule, and as with most general rules there are exceptions. However, most nymph tails are tied in at this spot. This is called the "tail tie-in point."
- C. "Splayed" tails: Build a "ball" of dubbing or thread at the tail tie-in point.

 Then mount the tail in front of the ball, winding the thread over the butts and up onto the ball.

 This will force the tips of the material to spread, or "splay" out. This technique can help stabilize the fly as it drifts.



- D. Length: In most cases, the tail length will be equal to the length of the shank. The hook shank consists of that area starting at the back of the eye, and ending where the hook begins to bend downward.
- E. Order of tying: Although there is some disagreement on this point, I normally tie in the tail for a dry fly first-i.e., before the wing. Tip: be sure to keep the butts long enough so that they meet up with the butts of the wing when that is tied in; this will create a smooth, even body when it comes time to dub the abdomen.



II. Dry fly bodies.

A. Shape of abdomen: The abdomen of the fly should taper up from tail tie-in point, so that the overall appearance of the abdomen resembles a cigar.

The reason for this is that most aquatic insects have tapered abdomens. There are several ways to achieve a good taper. First, and most intuitive, is to spin start with a tiny amount of dubbing when applying it to the thread, gradually increasing the amount applied to the thread. This has the effect of incrementally increasing the diameter of the dubbing noodle you are creating. As it is wound onto the hook shank, the tapered noodle will create a tapered abdomen. Another way to do it is to decrease the distance between wraps as you wrap forward. This has the effect of creating bulk



gradually. Which method is better? That's a matter of choice. Personally, I use the second method as it takes me less time than trying to taper the noodle.

- B. Thorax: Most nymph patterns call for creation of a thorax. This is generally the part of the insect where the legs are attached. The thorax will normally be more robust than the abdomen, and will be significantly shorter.
- C. Silhouette: The body of most mayflies and caddis is elegant and slender. Consequently, your flies should be slim, not bulky. Stoneflies are usually bulkier, but many of the stonefly patterns I've seen seem to go overboard. The bugs are still relatively slender, and I because I am a believer in sparseness of pattern, I tend to tie stoneflies slimmer than other tyers.

III. Dry fly wings.

- A. Mounting: Use the "45 degree" technique mentioned above.
- B. Placement: Normally the wing will be mounted about 1/3 length of the shank behind the eye (the "wing tie-in point). There are exceptions to this general rule; for example, there is a series of dry flies called "thorax" flies, where the wing is tied on at around the halfway mark on the shank.
- C. Size (i.e., height or length): On upright-wing flies, the wing should be slightly longer than the shank. You will find some disagreement in the literature on this point, but I like the wings just a bit longer. My reasoning is that when fish are "looking up" the first part of a bug that comes into the fish's cone of vision will be its tallest point. Generally, that will be the wing. A wing that is taller than the hackle will show first in the cone of vision, triggering (hopefully) a favorable response. That's my bit of fish psychology, anyway. Down-style or tent wings are generally the length of the shank.
- D. Wing materials: Wings can be fashioned from deer, elk, moose, or other hair; hackle points; duck flank or CDC feathers; quill feathers; or artificial yarns. While there are some commonalities, each type of material will require generally different techniques for application.

IV. Hair wings:

A. Tying in: There are a number of different styles of hair wings. With the exception of the tent-style wing, they are all tied on with the tips pointed out over the eye. Select a small bunch of hair, clean it and stack the tips to even them. Measure the wing by laying the hair along the top of the shank using your left hand, with tips forward. The final measurement should be shank length plus a little more-not scientific, just eyeball it. Using the 45 degree technique, tie in the wing at the wing tie-in point.



Hold the butts firmly with your left hand while tying

the wing down, in order to keep the wing from slipping around the hook. You want to have the hair all on top of the hook. Stand the wing up by pulling it upright by the tips (more on this later). Place 2 or 3 wraps directly in front of the wing right at its base. It is important to not build up a big shoulder in front of the wing. This will become evident when we discuss hackling. With the exception of the Comparadun style, take a "gather wrap" or two around the base of the wing to collect all of the hairs in preparation for the next steps. Trim the butts at a shallow angle to the rear in order to allow for a tapered body, otherwise you will have a large lump to deal with. Cover most of the butts with thread. From here the steps differ depending on what style of wing you will be creating.

B. Divided wings:

Take a bodkin and divide the upright wing into two equal sections. Try to be accurate here, because if one side is larger than the other, the fly will tend to tip in the heavy side direction when drifting, creating an unnatural presentation. Take 3 or 4 wraps around the base of each wing. With the last wrap on each wing, pull rearward with the thread, and catch the thread in the still exposed butts.

This serves to hold the wing upright without having to build up a large shoulder in front of the wing. Voila! You have a divided hair wing.



C. Post wings.

Post wings are used for parachute style flies. Instead of dividing the wings, just take a gather wrap and then wrap a little way up the post and back down. Again, with the last wrap, pull to the rear and trap the thread in the exposed butts, to keep the wing upright.

D. Tent wings.

Tent wings are used mostly on caddis patterns.

When using hair to form the wing, measure to the back of the bend as a general rule. After measuring, clip the butts at an angle to the rear and tie them in at the wing tie-in point using the 45 degree technique. Keep the tips firmly in your left hand and pull up on them to assist in keeping the hair on top. Once the wing is firmly attached, continue to hold the tips and trim and tie down the butts.

E. Comparadun style. The Comparadun style hair wing is essentially a fan of hair across the top of the shank. Hackle is not used with this style wing. Once you have tied in the hair as instructed above, pull it back by the tips and with your right thumbnail placed at the base of the hair, push rearward. This will splay the tips out fanlike across the top of the shank. Build a shoulder of dubbing in front of the wing; this serves to hold the wing upright, and resembles a thorax.

Tip: Except for the Comparadun style of wing, don't build a large shoulder in front of wing in an effort to stand it up. Instead, use "tie back" technique mentioned above.

- V. Hackle point wings. This style of wing utilizes the tips of rooster or hen hackles to suggest a mayfly wing. It can be an exercise in frustration, but there are a few simple techniques that will eliminate most of the angst.
 - A. Selection of hackle tips--hen vs. rooster. Rooster hackle points will be narrower. It is inadvisable to



use saddle hackle or the smaller hackles at the base of the cape, because they will not present a solid silhouette. Rather, in the middle of a good cape there will be good hackles that are generally too large for normal dry flies. These have wider points, and are perfect for hackle point wings. Some tyers prefer hen hackle points because they are wider and present a more pronounced profile. While that is true, they tend to be softer and don't withstand soaking and fish mistreatment as well. Again, it's a matter of preference.

- B. Preparation of hackle point wings. Don't strip the barbules from the hackle stem, contrary to what
 - you might see in some books. This is an important technique. If the barbules are stripped off before tying in the wings the hackle points will tend to twist, making it difficult to achieve a good, uniform, symmetrical wing. Instead, leave all barbules on the stem.
- C. Application of hackle point wings. Place the convex sides of the hackles together so that the points stick out in opposite directions, and even up the tips. Use the "45 degree" technique to tie them in at the wing tie-in point, tips forward. If they twist, back off and try again. If you have done it right, the tips will be pointed out over the eye of the hook, and they will be symmetrically divided.



Trim the butts at a taper as in the case of hair wings, and tie them down securely.

- D. Standing the wing up. Hackle points are not as hefty as hair, so it takes a little finesse to get the wings looking correct. Pull them up vertical and place several wraps in front of their bases. This should be sufficient to stand them up. Don't build a shoulder in front of them. Figure eight twice between them to secure the separation and strengthen the base. It helps to add a tiny drop of super glue at this point-but do it at the underside of the hook.
- VI. Wood duck (or other flank feather) wings. To my mind the Light Cahill is one of the most elegant of the traditional Catskill-style dry flies. It has a long and hoary tradition behind it, going back to its creation in 1880 by Dan Cahill. Supposedly Theodore Gordon modified it around 1890. The Light Cahill, the Quill Gordon and the Hendrickson are often referred to as the pinnacle of the Catskill style of tying. For a good description and tying instructions see Randall Kauffman's Tying Dry Flies (revised edition, 1995), published by Western Fisherman's Press.

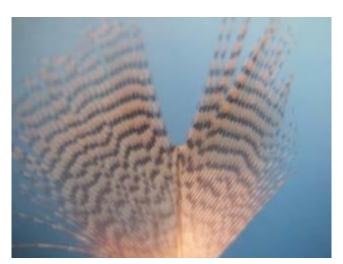
These three flies are characterized by a wing made of wood duck flank feathers. Unless you have a duck hunting friend, you will find that these beautiful lemon-colored barred feathers are ridiculously expensive. There are substitutes such as mallard flank dyed wood duck color, and there is an old recipe for "dying" other flank feathers that I have included at the end of this section. But real wood duck is...well...let's just say it's just not the same.

There are a few tricks to creating a good wood duck wing.

A. Technique for assembling the wing. Take a well-marked wood duck flank feather (not the ones with the dark tips) and cut out the "heart" at the top, down to a point on the stem where the remaining barbules are long enough for a wing.

Set the heart aside, as it can be used for the tail (actually, the tail should be tied in first as pointed out in the discussion of dry fly tails above). If your wood duck feather is sparse, add another one and stack them together so you will have sufficient fullness for the wing.

B. Application of the wing. Holding the feather in your right hand, stroke all of the barbules upward and gather them together by pinching them between your right thumb and forefinger. Switch hands and measure the wing to proper length. With tips out over the eye, tie in the wing at the wing tie-in point, keeping all of the barbules on top of the hook. Trim the butts at a shallow angle, allowing them to meet the butts of the tail to create a smooth body. Pull the wing up by the tips and place two wraps at its base. Separate the fibers into two equal segments, and figure-eight between them once, catching the thread in the remaining exposed butts of the wing; this will both separate the wings and ensure that they stand up properly.





Note that only a few wraps are required; don't bulk up the fly with excessive wraps. Hold your half-tied fly up to the light and notice how the light filters around and through the wood duck.

- VII. Tent-style wings. We discussed tent wings made of hair above. There are other materials that are used for tent wings for caddis and hoppers, including turkey tail feathers, pheasant tail, and similar quills, as well as artificial materials such as Antron yarn. The best advice I can offer is to treat the feathers before using them w ith an art fixative such as the one made by Grumbacher's. It makes tying tent wings much easier, and it increases their durability.
- VIII. No hackle wings. These wings are upright, and made of duck quills (primary flight feathers). As elegant as they are, they are difficult to tie and of limited durability. The best description I have seen is in Kaufmann's book mentioned above, beginning at page 80.

- IX. Hackling dry flies. Hackling is the process of winding a feather onto a hook, either perpendicular to the shank (the traditional Catskill style) or around a posted wing (the parachute style). It is not difficult, but there are a few good tips and tricks that will make the process much simpler and enjoyable. Most hackle for dry flies comes from roosters, not hens; the reason is that rooster hackle is much stiffer and far less webby adjacent to the stem. There are capes (also called necks), and there are saddles. Saddles are from the back of the chicken, and feature long, slender feathers that can each produce 3 or 4 flies. Genetic alteration of roosters bred specifically for hackle has produced unbelievably high quality feathers for tying dries. Capes with hackle down to size 30 can be found; such a cape will have a large range of feathers moving from front to rear, usually including a lot of good 14's and 16's which are probably the most popular dry fly sizes. Many tyers are purchasing saddles in lieu of capes, especially since accurate and reliable grading techniques have evolved. For example, you can purchase a package of saddle hackles that are all size 18, and get a lot of flies out of those feathers. There is no one answer here, but most tyers do keep some capes and some saddles.
 - A. Hackle selection. It is important to select the right feather for the job at hand-which can differ. Here is a basic primer on hackle-with emphasis on "basic." Books have been written on this subject.
 - Size of barbules: The length of the barbules should be equal to the length of the shank. There
 are handy little gauges that attach to your vise that will enable you to match barbule length
 with hook size. These are indispensable.
 - 2. Characteristics of good hackle. When purchasing hackle, whether it is a cape, a saddle, or just a package of feathers, be sure to examine the product carefully before buying it. Here are a few things to look for:
 - a. Good section of "sweet spot." Good hackle will have little or no webbing next to the stem. Webbing captures and holds water-not good for a dry fly. Webbing is easily seen by holding a feather up to a light source; it is the opaque fuzziness between stem and end of barbule. It generally will decrease toward the tip of the feather. What you are looking for is a long "sweet spot" or web-free section. Generally saddle hackle will have little or no webbiness along the entire length of the feather.
 - b. Uniformity of barbule length. This is important, because if you are tying a #14 fly, you want all the hackle that you apply to be of a length appropriate for that size. If part of the feather is #12 and part #14, you have just made a #12 fly instead of a #14. In other words, the largest barbules are what dictate the hackle size. So, look for feathers whose barbules are of uniform length from tip to the end of the sweet spot. Generally saddle hackles are more uniform than neck hackles-but this is not always the case.
 - c. Stiffness. The old adage, which is still quite true, is if you poke your lip with the barbules of a hackle, you should feel a tickle; if not, it's too soft. Stiff hackle will float your flies much better and longer than poor hackle.
 - d. Pliability of stem. Capes or saddles with thick stems should be avoided. They add unwanted bulk and weight, tend to twist, and are difficult to wind. Good capes will have feathers with thin, pliable stems; saddles normally have very soft, thin, pliable stems.

B. Preparation of the hackle.

1. Removing the "fuzz." The fuzz is the fluffy stuff at the bottom of the feather; however, if there is webby material on the stem, that should also be stripped back to the sweet spot. Actually it

is best to simply cut the stem back to a point near the sweet spot, and then cut the webby barbules off the stem with your scissors. Pulling them off will serve to weaken the stem.

- 2. Removing barbules for winding purposes. Once you have a clean stem and are ready to tie the feather to the hook, position the feather so that the concave side faces forward; this is the proper posture for the feather where you are tying Catskill (i.e., perpendicular) style.
- 3. Dry hackle ready to wrap tip: Note that the right side (facing the feather) will contact the shank first. From that side remove about 1/8" of the barbules. The reason for this is that it will make winding the hackle much easier.
- 4. Don't "spread" the barbules. In some books, you will see pictures of the hackle with the barbules spread downward before tying it on the hook. This is done by stroking the barbules downward. I believe that this is a mistake, as it tends to weaken the connection between the barbule and the stem. It is certainly not necessary and as far as I can tell it does not improve on your winding performance.

C. Tying in the hackle.

- 1. Point of application. The point of application-i.e., where you tie the feather on-will determine how many full winds are on the bottom of the fly. This is a matter of preference-some tyers tie the hackle on the bottom of the hook, and others tie it on the top.
- 2. Tie the hackle down both in front of and behind wing, leaving small amount of bare stem showing above the tie-in point to begin winding with (including that area where you've removed a few extra barbules, as instructed above). This is true for both Catskill and parachute style flies. However, for parachute style flies, you'll need to decide whether you are going to wind clockwise or counter-clockwise (see below), and then tie in the feather accordingly. For clockwise winding, the feather needs to be tied in so that the tip is facing away from you; the converse is true for counter-clockwise winding.
- 3. Proper hackle posture. As mentioned above, when tying Catskill style, the hackle should be tied in with the concave side facing toward the eye. When tying parachute style, the concave side needs to be facing down.

D. Winding the hackle.

- 1. Winding hackle. As with the previous procedures, there are a few good tips which, if followed, will help you in the sometimes-frustrating process of winding the hackle-whether it be the Catskill style or the parachute style.
- 2. Make sure that the hackle is perpendicular to the axis of the hook when beginning to wind. The first wind is critical in this regard. Removal of a few barbules from the right side of the stem as instructed above will help, but sometimes the hackle just won't cooperate. This usually due to a too-thick stem or a defective stem. In some cases you can force the hackle to cooperate by manipulating it with your left hand while you wind it with your right. Saddle hackles seem less inclined to twist.
- 3. If you are using a single hackle, take two or three winds behind the wing and three or four in front. Careful placement is key; don't crowd the eye of the hook, because you need to leave sufficient room for a nice, neat, small head.
- 4. If you are using two hackles (and some patterns such as the Adams do call for two) you can try winding them at the same time. This is not recommended unless you are a more advanced tyer. Winding them one at a time requires that you use a "weaving" technique to avoid tying down the barbules from the first feather wrapped.
- 5. Always keep back from the hook eye to leave room for a clean head. This is a vexing problem for new tyers, and experienced tyers must be constantly aware of where they are in placing their materials on the hook to save room at the front. One solution is to keep the first eighth inch of the hook behind the eye free of all thread, and don't violate that space until it's time to do the head.

X. Finishing the fly.

- A. Leave plenty of room for the head as mentioned above-it should be at least one eye in width.
- B. Taper the head down to a point at the eye, using thread wraps. Be careful, however, to avoid adding unnecessary bulk; bulk equals weight, and if the fly is front-heavy, it will land on the water face down. For this same reason, it's important not to have the wing and hackle too far forward.

C. Finishing knots.

- 1. Whip finish. This is the standard finishing knot for fly tying. There are tools that make this easy, but I always insist that my students learn how to do it with their fingers before using the tool. That way there is a clear understanding of the knot, and how the tool proceeds to create it. There is an excellent primer, with clear photos, on whip finish tools on the Fly Anglers Online web site; here is the URL for the article: http://www.flyanglersonline.com.
- 2. Half hitch. The half hitch is used by some tyers to finish the fly. It is a simple overhand knot tied several times in succession. It is not as secure as a whip finish, in my view. I avoid it except when I need to secure materials at the end of a particular step in the process of tying a

fly. Here is a URL for the half hitch-it demonstrates this knot (along with a lot of others) via a video presentation: http://www.iwillknot.com/half-hitch.

VI. Imitation wood duck recipe.

Wood duck flank feathers are expensive, unless you happen to have a friend who hunts these critters. They are also one of the better materials for winging certain dry fly patterns, and for tails and legs on many nymph patterns. To obtain a reasonably good imitation of the lemon shade of the wood duck flank feather, try the following method. It's been around for a very long time, and I don't have the foggiest memory of how I happened onto it. All I know is that it's not my recipe.

- A. Items needed Picric acid (C6H3N307), obtainable from your local pharmacy or if not, look it up on the Internet. A half gallon bottle Three rusty ten-penny nails Water Mallard flank feathers, distinctively barred.
- B. Procedure 1. Dissolve 1 tablespoon of Picric Acid in water in the bottle. 2. Add the nails and feathers. 3. Fill the bottle with water. 4. Keep the mixture at room temperature, and allow it to stand for 3-4 days, watching the feather coloration towards the end in order to obtain the desired shade of lemon yellow. Remember, they will look lighter when dry 5. When the desired shade is obtained, wash the feathers and allow them to dry.

Nymphs

- I. Introductory Discussion. I won't deal with the "how to fish them" aspect of nymphs. That is a whole different subject, and is learned by paying one's dues. I teach nymphing in clinics and when I am guiding, and I understand that a lot of newer anglers find it difficult and bewildering to master. There are some simple techniques that will flatten the learning curve-and that's what I teach. For now, let's stick with the flies.
 - A. Importance of learning nymph flytying techniques. Most of what is set out above for dry flies, in terms of tying techniques has at least some application to tying nymph patterns. There are, however, a few things such as wing cases that are peculiar to nymphs; these will be covered here, but I won't repeat what has already been said.
 - 1. Improvement of skills. Some flyfishers only want to fish dry flies, and that's great. But most of us also want to fish beneath the surface. It's said that fish take 90% or more of their food intake below the surface. If that's true, then we need to know something about how to make our flies look like what they are eating down there. That's an oversimplification, of course, but it's right on the money. Thus, it pays to know how to tie good nymph patterns efficiently and quickly.
 - 2. Consistency. The old adage that "consistency is the hobgoblin of small minds" simply does not apply to fly tying. We want to reach a point where if we tie a dozen flies they all look reasonably similar. Perfection is not necessary; consistency is.

- 3. Flexibility and creativity. We fly fishers are inquisitive, curious, and often skeptical. Rigidity usually won't work; i.e., when you approach a stream or other body of water, you need to be prepared to make on-the-spot decisions as to what's going on with the fish and how best to entice them to your fly. Over time, each fly fisher seems to develop a collection of flies with which he or she is comfortable and confident. Often those flies are of the person's own creativity, he or she having observed insects' appearance and habits and formed opinions and conclusions about what was observed-not to mention results. At the tying bench this accumulated wisdom turns itself into new creations or most often into modified versions of tried and true patterns. We all know that good feeling that happens when we catch a fish on one of our own flies-well, when it's also a fly that we have concocted out of our own creativity, the pleasure increases exponentially.
- B. Importance of consistency. I briefly mentioned consistency above. You have arrived as a fly tyer when your flies are inconsistent only when you want it to be that way. To achieve consistency, resolve to tie at least a half dozen of a particular pattern at a sitting, and when done, compare and judge them. Another helpful tip: if you're going to tie the same fly in a series of sizes, start with the largest size, tie a half dozen, and then move down to the next smaller size. The acid test, of course, is what the fish prefer assuming you are fishing the fly correctly. However, don't be discouraged if you get blanked-just resolve to figure out why, and return to the vise with your newfound insights. Turn over rocks or do a seine; compare what you've tied with what you see. Tuck those observations away in your brain, or preferably write them down in your streamside log (a very valuable tool). This is fun, fellow anglers!
- C. Importance of "suggestion" vs "imitation." Show me a fly that is a work of imitative art, and one that is vaguely suggestive of a living insect, and I'll choose the latter-for fishing, that is-every time. Why? In general, imitative works of art seem lifeless and hard.

By way of analogy, take a look at a good painting. It won't look like a photograph. Rather, it will be purposely a bit (sometimes more than a bit) vague, designed to generate thought and emotion while leaving it to the observer to reach his or her own conclusions. So it is, I believe, with fly patterns-it is the suggestion of a life form that we want to portray to our prey. My experience tells me that in nature itself there are really no clear lines; rather, fuzziness around the edges, particularly where light patterns or movement is involved, is predominant. Fuzziness rules! Insects crawl, squirm, wiggle, and swim; so shouldn't our flies give the impression of those activities? I submit that hard bodied imitations simply are not as effective in doing that as a vague, fuzzy pattern is, all other things being equal

- II. The 8 important elements of a good nymph (in descending order of importance)
 - A. Summary. There are eight characteristics of a well tied nymph. I have prioritized them below. This is my opinion; there are a lot of good fly tyers out there who would differ with me. Here is my prioritized list, and then I'll briefly cover each factor:
 - size
 - motion
 - shape
 - proportion
 - contrast

- hue
- "flash"
- proper material
- B. Size of the nymph. Size matters! Where have I heard that? Take a look at the insects you find beneath river rocks or in your seine. Lay your imitation alongside one or more of them. The first thing that most anglers notice is that their patterns are too large and/or too bulky (even taking into account the fact that materials do slim down in the water). Your fly needs to be in proportion to what the fish normally see. Having said that, there are times when a somewhat larger or smaller version will work-sometimes even better. The point is that it is best to start with what you see in nature; if that doesn't work, get creative and don't keep beating the water with what doesn't work (assuming, of course, that you are properly presenting the fly).

The size question can be situational. For example, many anglers feel that during a hatch it can be productive to fish a fly that is larger than the hatching insect on which the fish are feeding. I've tried this with mixed success. What about that situation that we often face: fishing blind? Where there is no obvious fish movement, I tend to reach for the size fly that matches the insect(s) that I find beneath the rocks, and go from there.

C. Motion. Your flies need to look like they are alive-period. Suggestion of life can come from materials that move, or from vague glimmers buried in the fly that suggest bubbles or other light-reflecting values. A lot of movement is not necessary-rather, it's the suggestion of movement that counts. For example, consider the Wooly Bugger. Does it move when it's in the water? Silly question. Movement is the key to its success. Denny Rickards tells us that if you want your buggers to impart movement, minimize the wraps of hackle...and he certainly knows whereof he speaks. But the point is that he believes firmly that movement-action-of the fly is essential. A mentor, now sadly deceased, once told me never to weight a fly-"kills the action, it does," he said wryly and with some authority. The operative word, again, is "action."

Here's what Frank Sawyer, world class nymph angler, had to say on this point: "Good though my patterns had seem to me they lacked the very thing which trout were looking for. These fish knew there was something wrong and that what I was offering was in no way edible. I then also knew what it was and went home to construct other patterns. The trout wanted something which showed life near the surface of the water. They should have it." Nymphs and the Trout, Frank Sawyer, 1970 Edition, Crown Publishers, Inc., page 47.

To sum it up, pick materials that either move in the water or cause the perception of movement by building some trigger into the fly itself; and use techniques that maximize the benefit of those materials.

D. Shape of the nymph. Have you ever seined a stream, or watched it being done? If you have, you will have noticed that in general natural insects have a tapered, or "cigar" shape to their abdomen. Again, take one of your nymphs and compare it to actual insects to see whether and to what extent your flies have that same general tapered appearance. Notice the difference between the abdomen area and the thorax area of the natural. Usually, the abdomen is slimmer than the thorax. Your flies should incorporate this fact.

Famous nymph fisherman Charlie Brooks advocated tying nymphs "in the round," meaning that

viewed from any direction the fly looks the same. Thus, as the fly drifts along and tumbles among the rocks it presents a uniform appearance to the fish. Brooks considered this to be a benefit. Many standard nymph patterns are tied in this manner. His book Nymph Fishing for Larger Trout, 1976, published by Crown Publishers, Inc., is considered by many fly fishers to be the gold standard for learning to nymph fish.

- E. Proportions as between various parts of the nymph. Proportion is important in tying any type of fly. There are a number of aspects to this concept, but a key point is that the angler/tyer needs to be able to visualize clearly what the critter in the vise should look like when complete. Then, while applying the materials, the visualized proportions of the fly should be kept firmly in mind when proceeding through the pattern steps. Keeping the overall form in the forefront during tying will vastly improve your finished products. Here are some hints:
 - 1. Learn to mentally divide up the hook into segments.
 - I usually use thirds as a base. For some patterns perhaps a different framework would be appropriate. For example, usually the first third of the hook is occupied by the nymph's thorax area. When proceeding through the steps that must be kept in mind.
 - 2. Tail length. In general, as in dry flies, the tail (if any) should be no longer than the length of the shank in order to be in proportion.
 - 3. Abdomen length. Usually the abdomen occupies the rear two thirds of the hook.
 - 4. Thorax length, including Wingcase. The thorax, as mentioned above, will normally occupy the front third of the hook. This would include the wing case that normally covers the top of the thorax.
 - 5. Ribbing. Where ribbing is used, its spacing should be such that it is spaced closer toward the tail, gradually increasing the space as you move forward to the thorax.
 - 6. Legs. Legs on nymphs can be included in a number of ways. Many flies are tied with a "beard," which is merely a set of legs tied on the bottom of the hook just behind the eye. Another way is to wrap soft hackle around the front of the fly. A third way is to place hackle barbs on either side of the thorax. Regardless, the legs should not extend beyond the point of the hook.
 - 7. Head. The head of the fly is your signature. Make it look good not only for appearances but for function. An oversized head will not look natural, and will tend to unravel easier. It should be about one eye width in length, and tapered from front to rear (smallest at the front).
 - 8. Quantity of dubbing. One of the most difficult things to teach beginning tyers, in my experience, is to limit the amount of dubbing that is used. I believe in sparseness, so I tend to put small amounts of material on the thread. If I need to increase the bulk, it is easy to do. Remember the point about the real size of naturals. There are various dubbing techniques; each has its place. For example, when tying a smallish pattern there is no reason to use any method other than dubbing material directly onto the thread to form a noodle. However, when tying patterns that require some bulk (see, for example, my Stick Caddis), or where the

material itself is coarse and difficult to apply directly to the thread, then a dubbing loop (with associated tools) is required. There are other methods, but those two are the most commonly used.

F. Contrast within the nymph. In this context, "contrast" refers to a distinct appearance to each of the materials used. For example, there is contrast between the body material used to make the Hare's Ear Nymph (hare's ear, of course) which is generally light in color, and the dark color of the wing case (usually mottled brown turkey tail). Another example is the contrast between the abdomen of a caddis larva pattern and its black head.

Why is contrast important? In my view contrast is a strike trigger. Fish will strike at what they are used to seeing (exceptions exist, of course). If for example you examine a stonefly larva, you'll note the different colors of the underbelly and the back of the bug. An imitation with built-in contrast something like the real stonefly will not look unusual to a trout.

G. Hue of the nymph. We all know and understand what "color" means. But as we also know, there are gradations of color. "Hue" refers to those gradations within a color range, at least in my view. For example, is olive a color or is it a hue? You could look at it as if it is a gradation of green. I think of it simply as the shade taken on by an insect in its surroundings.

I have never heard anyone claim that they know how fish perceive color; we may never know. But it is probably true that they can distinguish hue-i.e., if a bug is somewhere within a particular color's range, fish may recognize it as a food source. For fly fishers trying to puzzle out what fly to use, if the predominant shade of the naturals is a medium gray, it might not be productive to fish a very light gray pattern.

- H. Use of proper materials to tie the nymph.
 - 1. Hooks. A few years ago 3 friends and I purchased the entire tying stash of a 90+ year old gentleman who had recently passed away. It was an amazing hoard, including many thousands of hooks. Most of those hooks were no longer in production, but were perfectly usable. He had hundreds of different styles of hooks in various sizes. I have since given away and sold most of those hooks, but have retained a core sampling that fits well with my existing hook inventory.

Hook inventories can quickly become unmanageable and unbelievably expensive. The approach that has served me well is to first divide things up by category; here are the major categories of trout hooks that I use:

- Dry fly hooks
- Nymph hooks
- Hopper hooks
- Streamer hooks

Within each category I keep a number of the most common sizes of the "standard" hook for the category-manufacturers list these in their hook charts. I generally try to substitute the standard hook where fly patterns specify a certain variant of the standard, since there is normally no significant difference. If a specific hook is indeed essential and I can't substitute, I will purchase a small number (usually minimum 25 in a package) of the specialty hook. This procedure helps keep inventory and expense minimized. So, when you see that new pattern in a magazine and decide to try it, don't automatically run out and buy the specialty hook called for; learn to find out the characteristics of that hook and compare them to those of the standard hooks you already have. Usually a substitution can be made.

Tip: don't buy cheap hooks. It's frustrating to discover that the reason for losing that nice fish you took so long to fool is a broken or bent hook. Most fly shops carry only the highest quality brands. Stick with those-you're equipped with an expensive rod, reel, and line and everything else on your person, and have taken the time and expense to get there, so is it not worth the extra few cents per hook?

- 2. What are "good" or "proper" materials? These adjectives don't necessarily equate with "most expensive," and it is not always necessary to buy the exact material specified. Even in the fly fishing business there is "brand premium" to consider. I don't believe anyone has improved on Mother Nature's hare's ear or muskrat. They may have enhanced it or otherwise modified it by adding things to it, but that does not make it better-just different. So, for example, a pattern might call for a specific product such as Spirit River's "Dazzle Hare's Ear." But you don't necessarily have to buy the specific product called for by the pattern; instead, you can modify some of your hare's ear by adding some flashy material to give it a little more life, or by blending in some synthetic material in your stash, or by changing its color by dying.
- 3. Use of "flash." In this context, "flash" means artificial material such as Flashabou, Crystal Flash, or one of the myriad other similar products on the market. For trout flies, a little flash can help to suggest life by creating the illusion of movement and/or light interaction. For example, natural insects at times will carry bubbles with them and bubbles refract light. A caddis pupa moving up the water column on its way to the surface will sport tiny reflective bubbles as will a diving caddis adult on its way to the bottom to deposit eggs. Fly fishers have discovered this and have created patterns that put this physical phenomenon to work through the use of bright materials such as flashabou and Antron built into the materials. But the operative word here is "little." Too much flash results in the flash becoming the focal point of the fly instead of its general form and suggestiveness. In turn, that causes fish to flee something that looks unnatural. Of course there are exceptions, but in general less is more. Think sparse.
- 4. Material preparation. Let's assume you're getting ready to tie the recommended at-least-half-dozen of a specific pattern, say the gold bead Prince Nymph in size 14. You'll need #14 standard nymph hooks; beads sized to that hook; peacock herl; goose or turkey biots in brown and white; brown hackle; and fine silver ribbing. You can either prepare and lay out all your material for your 6 flies beforehand or you can cut enough biots, herl, and other material sufficient for one fly at a time as you tie them. You will find the former method much faster, more efficient, and relaxing. Put beads on all 6 hooks; cut enough biots and herl for 6 flies; lay out 6 hackles; cut a long piece of ribbing; and begin tying.
- 5. Customizing materials. Now assume you are going to tie a bunch of olive Bird's Nest nymphs in size 14, and you've laid out all the materials, including some olive muskrat or beaver fur. You go ahead and tie 6 good looking specimens, but the thought occurs to you that you might want to jazz up one or two more just to compare the results when you fish them. You can go

purchase some "enhanced" muskrat or beaver fur, or you can do your own enhancing by using some chopped up clear Antron yarn mixed in with the muskrat or beaver. This is where you can use your creativity to make your next trip a bit more interesting. Comparing results in this manner can geometrically spur future creativity. So give it a try.

With regard to the "how" of customizing, there are many ways to mix dubbing materials. I've watched excellent tyers mix it by hand as they tie, with great results. A method I like to use is to employ a coffee grinder to do the mixing. For example, my Stick Caddis pattern calls for a customized mix of Antron based dubbing material (I use Paxton's Buggy Nymph) and Spirit River's Lite Brite. Most Antron based dubbing is coarse with longish fibers; this renders it unsuitable for a coffee grinder because the material will just wrap around the blades and won't chop up easily. This is true for any material with long fibers, whether it's natural or synthetic. To solve this problem, I chop the Antron up into clumps that are about ¼" in width and let it drop into the grinder. Then I do the same with the Lite Brite, and hit the grinder button quickly 3 or 4 times. I don't let it run continuously because it will melt the Antron dubbing, rendering it useless. If you have done this correctly, you can hold the material up to the light and see a beautiful lifelike glow to it.

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