

Creekside Atlantic Salmon Fly Saturday Tying Class



Cosmo's Original



Kelson's Variation #1



Kelson's Variation #2



Pryce-Tannatt's Variation

July 16, 2005
The Gordon
Creekside Fly Shop
Salem, Oregon
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History

Pryce-Tannatt lists the following dressing for the Gordon under the mixed wing flies appendix in his book:

Gordon (hook 1¼" to 3")

Tag: Silver tinsel
 Tail: A topping and Indian Crow
 Butt: Black herl
 Body: First quarter, light orange floss; remainder, ruby red floss
 Ribs: Flat silver tinsel and twist
 Hackle: A claret hackle
 Throat: A light blue hackle
 Wings: Mixed – a pair of bright red hackles (back to back) or of Golden Pheasant sword feathers (in larger sizes); strands of Peacock herl; "married" strands of orange, scarlet, and blue Swan, Golden pheasant tail, and Bustard
 Cheeks: Tippets (small), and Jungle cock over; a topping over all
 Horns: Blue and Yellow Macaw

Poul Jorgensen gives the following dressing for the Gordon (mixed wing):

Thread: Black, prewaxed 6/0
 Tag: Flat silver tinsel
 Tail: Golden pheasant crest and Indian crow
 Butt: Black ostrich herl
 Body: Rear quarter, light orange floss; rest is ruby red floss
 Ribbing: Flat silver tinsel and twist (round tinsel)
 Hackle: Claret-dyed hackle
 Throat: Light-blue-dyed hackle
 Underwing: Two bright-red-dyed hackles back to back, with three or four peacock herls over
 Wing: Mixed – Married strands of orange, scarlet, and blue swan, golden pheasant tail, and speckled bustard
 Cheeks: Small tippet with jungle cock of same length on the outside
 Topping: Golden pheasant crest
 Horns: Blue and yellow macaw
 Head: Black tying thread

In Dunham's book, John Van Derhoof gives the dressing for the Gordon as:

Hook: Size 5/0 Mustad worm, reshaped to match 5/0 Allock blind eye
 Tag: Flat silver tinsel
 Tail: Golden pheasant crest and Indian crow
 Butt: Black ostrich herl
 Body: Rear ½ - light orange floss and scarlet floss
 Front ½ - crimson seal's fur
 Rib: Flat silver tinsel and fine silver lace

Hackle: Dark claret heron over the crimson seal's fur
 Throat: Light blue silver pheasant
 Underwing: Golden pheasant tippets, scarlet hackle, and peacock herl
 Wings: Married strands of orange, burnt orange, crimson, scarlet, claret, and medium blue turkey, Lady Amherst pheasant, golden pheasant tail, and speckled bustard
 Sides: Married strands of scarlet, orange, and medium blue turkey
 Cheeks: Golden pheasant tippet and jungle cock
 Horns: Blue and yellow macaw
 Head: Black with extra fine oval gold tinsel

He definitely makes some subtle to drastic changes to the fly. One can see he has added a very long body hackle. A full tippet has found its way into the underwing. Most interestingly is his choice in marrying the wing components. Instead of the usual three fiber sections of the same color married to the next piece, he has married in a separate color at almost every fiber. A smaller version of the wing has been added on top of the tippet cheek but under the jungle cock. Dyed blue silver pheasant has been used instead of a solid dyed saddle or neck hackle. For a finishing touch, a small band of oval gold tinsel, no more than three turns, is included in the head.

In Ken Sawada's second book, we can find that the dressing has changed. It is first listed in the section of 140 patterns from George Mortimer Kelson's 1895 "The Salmon Fly" as:

Gordon by C. Gordon

Hook: Bartleet 1/0
 Tag: Silver twist and yellow silk
 Tail: A topping
 Butt: Black herl
 Body: One-third yellow silk, and claret silk
 Ribs: Silver lace and silver tinsel (flat)
 Hackle: Claret hackle, from yellow silk
 Throat: Blue hackle
 Wings: One tippet backed with a sword feather of golden pheasant; peacock herl, bustard, swan dyed light blue, light green, and red-claret; Amherst pheasant tail and a topping
 Sides: Jungle
 Head: Black wool

It then appears again in the section listing 69 patterns from Pryce-Tannatt's 1914 "How to Dress Salmon Flies as:

Gordon by C. Gordon

Hook: 2/0 – 9/0
 Tag: Silver tinsel
 Tail: A topping and Indian crow
 Butt: Black herl
 Body: First quarter, light orange floss; remainder, ruby red floss

Ribs: Flat silver tinsel and twist
 Hackle: A claret hackle
 Throat: A light blue hackle
 Wings: Mixed – a pair of bright red hackles (back to back) or of golden pheasant sword feathers (in larger sizes); strands of peacock herl; "married" strands of orange, scarlet, and blue swan, golden pheasant tail, and bustard.
 Cheeks: Tippets (small), and jungle cock over; a topping over all
 Horns: Blue and yellow macaw

Alcott list the dressing for the Gordon (in plate 7) as:

Tip: Extra fine oval silver tinsel
 Tag: Yellow floss
 Tail: Golden pheasant crest
 Butt: Black ostrich herl
 Rib: Fine silver lace and narrow flat silver tinsel
 Body: First $\frac{1}{3}$ yellow silk floss; last $\frac{2}{3}$ claret silk floss
 Hackle: Claret from the yellow silk
 Throat: Blue hackle
 Wing: One golden pheasant tippet backed with a golden pheasant sword feather. Peacock herl on the sides, at the bottom of the underwing. Speckled bustard; light blue, light green, and red/claret swan; Lady Amherst pheasant tail. Single or double barbs of each type married together repeating themselves until three strips are built. Strips made of single barbs may have to be repeated four times for the proper width of the wing.
 Wing veiling: Jungle cock
 Crest: Golden pheasant crest
 Head: Black

The pattern, according to Bates (1987, 1996), was originated by Cosmo Grodon in the 1890s. Cosmo lived near Aberdeen on the Dee. This pattern has been dressed with many variations such that the fly could be toned down or dressed up in terms of its brightness. Bates notes Kelson as saying, "No two dressers of today make the fly alike" (Bates, 1987, p. 87). In Bates' book, one can see from plate X that the pictured antique Gordon most resembles the listing by Pryce-Tannatt. There are some deviations: tippet fibers are used in place of the Indian crow, yellow has be substituted for orange swan in the wing, neither horns nor tippet (in the cheek) are present, and a likely roof of bronze mallard has been added. In plate XIV, Albert Cohen has used the Kelson dressing. Gordon preferred to "use two body hackles, jay at the throat, and tippet in strands rather than the whole feather" in his own pattern (Bates, 1996, 15). In this plate (plate #6, p. 15) Bill Hunter has tied the Gordon using Kelson's second listed dressing (see below). In plate 31 (p. 80), Megan Boyd appears to have used Pryce-Tannatt's listed dressing.

Tag: Silver twist and yellow silk
 Tail: Golden pheasant crest and tippet strands
 Butt: Black ostrich herl

Body: First $\frac{1}{3}$ - dark yellow silk floss. Remaining $\frac{2}{3}$ - claret silk
 Ribbing: Silver lace and flat silver tinsel
 Hackle: Claret hackle, from dark yellow silk
 Throat: Blue hackle
 Wing: Two light red-claret hackles, back to back and veiled with peacock herl, light gray mottled turkey, dark mottled turkey, golden pheasant tail, bustard, swan dyed yellow and blue, and light mottled turkey dyed claret
 Topping: Golden pheasant crest
 Sides: Jungle cock
 Horns: Blue macaw
 Head: Black wool

Froding mentions in his book that the Gordon has many different versions, varying in color from very bright to discrete and dark ties. Kelson's book describes two patterns, which both differ from the original, having the front hackle as dyed blue instead of jay. Kelson's first listing includes a wing of two red golden pheasant sword feathers and two tippet feathers instead of tippet in strands. Otherwise "the pattern corresponds to the one by Gordon" (Froding, 1991, p. 97). The second listing differs from the original in that the tail includes tippet fibers in the tail and a yellow silk section has been substituted for the dark yellow. The wing components are different as light mottled turkey, dark mottled turkey, golden pheasant tail, bustard, yellow and blue turkey/swan/goose, and light mottled turkey dyed claret are used. Kelson's second listing is as follows:

Tag: Silver twist and yellow silk
 Tail: A topping and tippet fibers
 Butt: Black herl
 Body: One-third yellow silk, and claret silk
 Ribs: Silver lace and silver tinsel (flat)
 Hackle: Two claret hackles, from yellow silk
 Throat: Dyed blue hackle
 Wings: Two claret hackles, peacock herl, light mottled turkey, dark mottled turkey, golden pheasant tail, bustard, swan dyed yellow & blue, light mottled turkey dyed claret
 Sides: Jungle cock
 Head: Black wool

Pryce-Tannatt's listing, according to Froding, is true to the original Gordon except for the tag, added tail component, body color, and wing. It appears that the original Gordon had the body from Pryce-Tannatt's description and the wing from the first version of Kelson's account. From this we can deduce that the original pattern by Gordon was dressed in the following manner:

Tag: Silver tinsel, flat or oval, and yellow silk
 Tail: Golden pheasant crest feather
 Butt: Black ostrich herl
 Ribs: Flat silver tinsel and silver twist
 Hackle: Two claret hackles

Body: Rear $\frac{1}{4}$ - yellow silk floss Front $\frac{3}{4}$ - claret silk floss
 Throat: Blue jay
 Underwing: Golden pheasant tippet fibers in strands and peacock herl
 Wing: Speckled bustard, light blue, green, and red turkey/swan/goose, Lady Amherst pheasant tail
 Cheek: Jungle cock nail feather
 Topping: Golden pheasant crest feather

Why have I gone through all this trouble to list all these dressing from the below sources? The dressings listed by several authors after Gordon vary widely from the original. Nearly every part of the fly has experienced slight changes. In summary I will list the variations we can find in the literature:

Tag: Silver tinsel (flat or oval) or silver twist alone or with yellow silk floss
 Tail: Golden pheasant crest feather, and Indian crow or golden pheasant tippet fibers
 Body: Body divisions of 1 : 2 or 1 : 3; silk floss colors of yellow, dark yellow, light orange, then claret or ruby red silk floss
 Hackle: One or two claret hackles
 Throat: Blue jay or dyed blue hackle
 Underwing: A pair of bright red hackles, tippet in strands, a pair of whole tippet, or a pair of golden pheasant sword feather
 Wing: Orange, scarlet, and blue turkey/swan/goose, golden pheasant tail, and bustard or swan dyed light blue, light green and red claret Amherst pheasant tail or speckled bustard, light blue, light green red claret swan, Lady Amherst pheasant tail or orange, burnt orange, crimson, scarlet, claret, and medium blue turkey, Lady Amherst pheasant, golden pheasant tail, and speckled bustard
 Sides: Jungle cock alone or with small tippet
 Head: Black thread or black wool

So, with all these variations, which of them shall we tie today? Cosmo's original.

Drawing and Laying Out Your Fly

Laying Out the Fly

Note: The best setup for the layout stage is either to place a photocopy of the hook or trace the hook's outline on a piece of paper set on a light box. A practical solution is to tape or hold the proportion tools up against a window, place the photocopy over the transparency, and then draw your marks. or trace the hook's outline on a piece of paper set on the light box.

Remember, this exercise is only a guide for you. You may make whatever adjustments you wish. The whole point of this pretying preparation work is to get your fly to turn out how you want. You will be able to select the type and size of materials you are most likely to need and spend more time tying and less time sorting through materials.

Photocopy the Hook Life Size

Try to get the hook centered in the page. Place a piece of white paper on top of the hook before making a copy. This will prevent any unsightly smudges, black dots, and other marks that would make your working copy look like it was the copy of a copy of a copy of a copy. A further option is to make a scan of the hook on a flatbed scanner and print out a copy of the scan.

Draw in the Silk Gut

Draw a line that is level with the majority of the hook shank extending out and away from the hook's point. This may prove difficult on Bartleet type hooks and rather facile on Pryce-Tannatt type hooks. We will use this later to draw out the tail. Sketch how large you want the silk gut eye to be. How long of a tag end left from the silk gut eye will influence the need for a white floss base in order to make a smooth underbody for the silk body. Gut options are discussed in a later section, Tying Considerations.

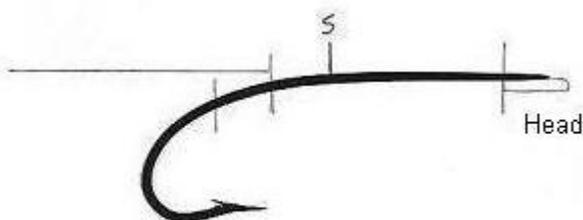


Separating the Shank

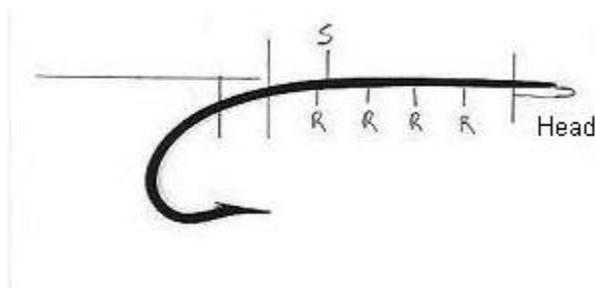
Visualize an imaginary line that is perpendicular to the top edge of the hook shank and just touches the point of the hook. Make a mark with your pencil across the hook shank at this point using a right triangle. There are a couple options as to where the butt can be placed. Some tyers place the front edge of the butt even with the hook point. Others line up the rear edge of the butt with the hook point. You could even line up the midpoint of the butt with the hook point. It is up to you; your choice will effect the length of the tag and body slightly. The tag of the fly usually takes up the space between the butt and an imaginary line, parallel to the line you just drew, that is even with the barb of the hook. Determine where and how large of a butt you would like your fly to have. Make a mark that is perpendicular to the hook shank and even with the rear edge of the barb of the hook. By no means does this require you to have a tag that extends to even with the barb of the hook. This exercise just provides a way for you to visualize your fly without having to actually tie it, saving time and often precious materials.



Now onto laying out the body, ribs, and body junction. Before we do this, we need to reserve space for tying the underwing, wing, throat, other adornments, and finishing the head. Reserve about $\frac{1}{4}$ " for the head. Mark this space off on your model. Take your body division tool marked '4 Body Sections'. Lay it over the model such that the far left edge lines up where the butt will end and the far right edge lines up where the head will start. Mark on the top of the shank where the silk junction will occur, between the first and second quarter. Just on top of the hook shank, make a mark and label that spot with an "S".



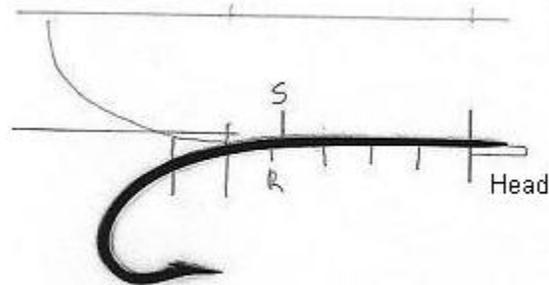
This will prevent confusion later on. Select the body division tool marked "5 Body Sections". Line up the far left and right edges as you just did. Make your four pencil marks on the underside of the shank of the model. Label each of these with an "R". Now all of the body proportions and parts of have been laid out.



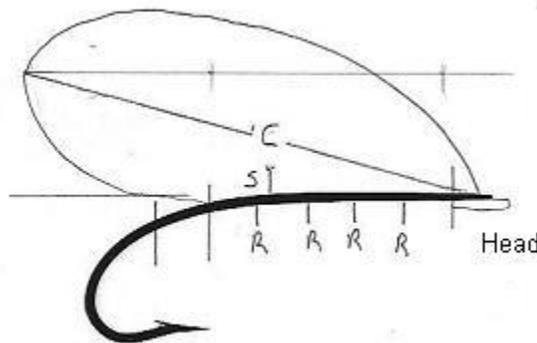
Laying out the Tail, Topping, and Horns

Measure the gape of the hook (for the CS10/3 #3/0 it is about 16 mm). Using your right triangle as an aid, make a mark a distance equal to the hook gape above the butt and also above where the head will be. Connect the marks along a straight edge and draw a line out beyond approximately where the tail will end. Now from your mark above the butt, measure a distance rearward from this point equal to $1\frac{1}{2}$ times the hook gape (about 24 mm). Make a mark along the line at this distance. This is where the tail will end. Take the tail proportion tool (in this example we will use the $1\frac{1}{2}$ proportion), and set the tie in end of the trial tail at the rear edge of the butt and the tip of the trial tail even with the last mark you made. Draw out the curve of your tail. For a 1 : 1 proportion, use a circle with a radius equal to the hook gape. This will be the approximate shape, length, and proportion of the fly's tail. Draw a line from the

end of the tail (where it will meet the wing topping) to the point of the blind eye. Label this line beyond the head with a "C".



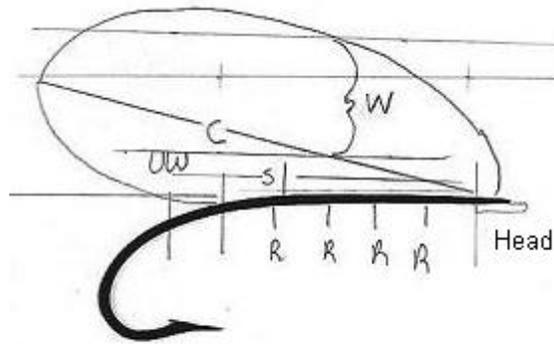
Now use the topping proportion tool (in this example we will use the 4 : 1 proportion) to draw out the wing topping on your fly. Now you can start sorting through your supply of crests for appropriately sized tail and wing topping feathers.



If you do not wish to use the proportion tools, you can determine approximately what size topping feathers you will need for both tail and wing topping. See this explanation in Appendix 1. You will still have to check these for correct size when tying the fly.

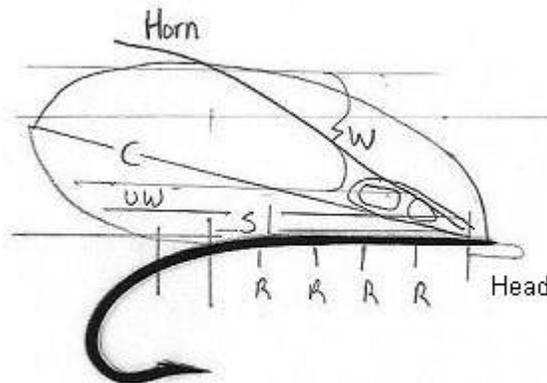
Positioning the Underwing and Wing

The underwing and wing will fill the space between the body and topping. There is usually a slight gap between body and underwing and no gap between underwing and wing. How much space exists between the body and underwing is up to you. Go ahead and mark out a line 2 mm above and parallel to the fly's body to represent this gap. Draw another parallel line, this time 3 mm above the previous. This line will mark the lower boundary of the wing. The underwing will definitely be more than 3 mm high, but the wing will cover any of the underwing above this line. The width or height of the wing is usually equal to the hook gape. Mark this out as well. You will notice a slight gap between the wing and the wing topping. Do not despair. The gap will not likely be there on the finished fly.



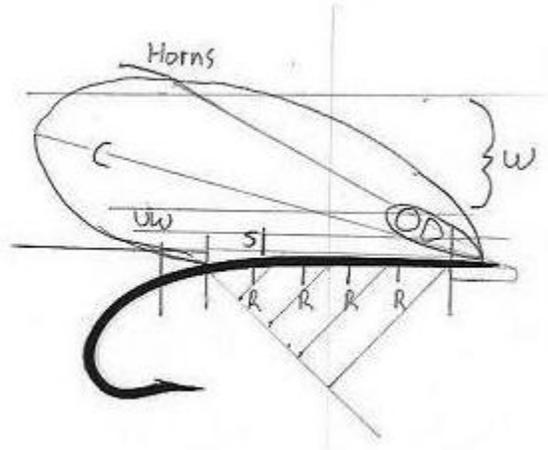
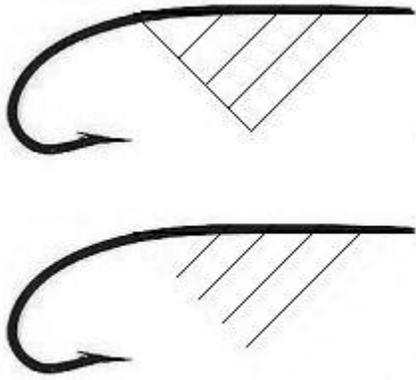
Positioning the Cheeks and Veilings

The cheeks and veilings are usually centered along the line marked "C" or with slightly more than half of the cheek above the line. The horns are normally positioned well above this line so as to meet just aft of the peak of the wing topping, just above the butt.



Situating the Body Hackle Barbs

There is a general appeal towards a fly that has a taper to the wound body hackle such that the hackle barbs continually increase in length towards the fly's head. The barbs of the final turn are equal in length or slightly shorter than the hackle barbs of the throat, if present on the fly (which is true in our case). An appropriate and pleasing relationship exists between the body length and the length of the hackle barbs. Picture a right isosceles triangle, with the hypotenuse lying along the fly's body and the other two sides underneath the hook shank. Of the two sides of equal length, the ends of the hackle barbs should just touch this left line. The right line represents the barbs of the final turn of the hackle. I have drawn this out by measuring the length of the body (32 mm). I found the midpoint of the body, measuring 16 mm in front of the butt. At this point I drew a line perpendicular to the hook shank. I then measured 16 mm down below the shank and made a mark. Next I drew two lines, both originating from this point. One extends to where the butt ends on the shank, and one extends to where the head begins. All that remains is to draw in the three other turns of hackle barbs. I divided the left line into four sections (6 mm per section) and drew three lines, parallel to the final turn of hackle barbs, from the shank to the junction of the sections of the left line. Now we have completed our fly layout!



Tying Considerations

Where do the Trouble Areas Lie?

In fly tying, and especially in the area of the Atlantic salmon fly, a fly with clean lines and nice proportions is respected and valued. These characteristics, shown in a fly, usually suggest or demonstrate that the tyer has thought out the fly's entire construction process and has avoided or solved pitfalls unique to the materials, tying techniques, and the pattern itself. In this section I aim to describe where some problems areas, particular to this fly, are likely to arise and make suggestions as how to combat these challenges. Several include keeping the number of thread wraps to a minimum, smoothing out the material tie in points along the silk body due to the staggered hackle and ribs, and preparing for the underwing main wing.

Making the Eye

Atlantic salmon flies are often tied on blind eye hooks. This type of hook necessitates the attachment of an eye material, whether it be twisted silk gut, twisted monofilament, or braided Dacron backing. The gut placement on the hook and how much silk gut is used can effect both the final shape of the body and the foundation of the wing. With respect to the wing's foundation, the gut is usually tied underneath the shank in order to give a triangular look when viewed in cross section. Tying the gut in on the sides creates a rather wide head. As more components are added at the head, nearly all of them attached above the hook shank, the head naturally becomes more spherical in shape.

In theory, a tapered underbody can be created without the use of a white floss base. The following can be a bit tricky to achieve since it requires a careful approach. Mark out the spot for the tag/tip/tail/butt at the rear of the fly. This method differs in the length of gut material tied in. Measure a length of gut that will be long enough to form the eye plus have tag ends that are long enough to butt up against the front edge of the butt. You will need a piece of eye material anywhere from 2½" to 5" long. Here is why you will not need any floss base for a tapered underbody. Most blind eye hooks have a filed taper to the front one-half to one-third of the hook. Once the eye has been formed and tied in, the tag ends are bound down along the underside of the shank. As you secure the tag ends, wrapping back edge to edge, the diameter of the fly (shank plus gut) will gradually increase, reaching a maximum where the hook's taper ends. Now how do we gradually decrease the fly's diameter from this point rearward to the butt? Mark the gut at approximately this point before you tie it in. Chew on the ends of the gut, gradually flatten the gut with pliers such that your gut has a taper to it, or stagger cut the two to eight individual gut strands.

For this particular pattern, if we use this full bodied method, we can run into the problem of where to place the ribs. The ribs cannot be hidden as well underneath the shank compared to when only ¾" of gut is used. You can tie in the ribs at the same time as the gut to get as thin a body as possible. Tying in the ribs along the sides after tying in the gut will make for a wider body while tying along the underside will make for a taller, less rounded body. Just something to consider.

Working the Tag

My aim here is to reduce the bulk in and near the tag to a minimum. This will make tying in both the tail and butt easier by paring down material that may get in the way in order to make for a smooth transition into the body. A technique that can work is to begin by attaching

the tag material just aft of where you want it to end. Wrap the tag material edge to edge down the shank and back. When the tie in point is reached, the last turn of tinsel taken should be enough to hold firmly the waste end without thread. Keeping a tight hold of the tinsel, take off as many thread wraps as used to tie in, and clip the waste end as close to the shank as possible. Flatten down any remaining stump with your finger (usually the case with metal tinsel as it is stiff). Now make one or two more wraps of tinsel. Tie off with one to three thread wraps. The tag should be absolutely flat. Only the wraps of thread present are those used to tie off the tinsel.

How Much Material is Enough?

How long do the ribs and silk strands need to be? With a little ingenuity we can figure out the length of each material that we need to complete the body of this fly. See the explanation in Appendix 1. Also depending on the material used for the married wings, using any quoted number of fibers may leave you with a wing small enough for a #2 or large enough for a #8/0. Consult the information of fibers per inch of stem for several winging materials in Appendix 1.

Thread Watchers or "The gun is missing. Whoever has the gun must be the killer!"

After reviewing the tying instructions, it is conceivable to tie this fly with very few thread wraps. Given the suggested number of wraps to tie in, to take off, and to tie off with, you could tie this fly in as little as twenty-two or fifty-one thread wraps. This excludes tying in the gut, wrapping down to the tail, wrapping back up to the ends of the gut, wrapping down the shank to secure the ribs, wrapping back up to the body division, wrapping up to the ends of the gut, and finishing the head. Even if these wraps are edge to edge, we can work with almost the bare minimum of thread and still complete an elegant fly. Below is for the Pryce-Tannatt version. As this variation of the original has the most components, simply subtract the extra parts if tying the original or either Kelson variation.

<u>Fly Part</u>	<u>Wraps On</u>	<u>Wraps Off</u>	<u>Sum of Wraps On</u>	<u>Total Wraps on</u>
Tag	2 to 3	2 to 3	0	0
Tail	2 to 4	1 to 2	1 to 2	2 to 4
	2 to 4	1 to 2	1 to 2	
Butt	1 to 2	?	1 to 2	1 to 2
Ribs	/	/	/	/
Silk – rear	2 to 3	1 to 3	0 to 2	0 to 2
Hackle	3	3	0	0
Silk – front	1 to 4	0 to 3	1 to 4	1 to 4
Ribs	/	1 to 2	2 to 4	2 to 4
Hackle	/	1 to 2	1 to 2	1 to 2
Underwing	2 to 4	1 to 2	2 to 4	4 to 8
	2 to 4	1 to 2	2 to 4	
Wing	2 to 8		4 to 8	4 to 8
Throat	2 to 3	?	2 to 3	2 to 3
Cheeks	1 to 4	1 to 3	1 to 4	2 to 8
	1 to 4	1 to 3	1 to 4	
Topping	1 to 3	1 to 2	1 to 2	1 to 2

Horns	2 to 4	0	2 to 4	2 to 4
-----			total thread wraps on	23 to 51

Which to Tie In First?

This fly presents some instructive challenges to solve. In particular, as this pattern's body is not constructed of any dubbing for any portion (drat), the ultra flat appearance we seek is likely to encounter two bumps, literally depending on a couple of decisions. The first challenge, as seen in the fly layout, is the body is composed of not one but two sections of floss. This is not inherently a grave concern. The puzzle presents itself in the alignment or lack thereof between the positioning (proportioning) of the floss body divisions in relation to the body rib divisions. The first turn of hackle traditionally starts as the body rib begins its second complete turn. As we strive to keep with this customary practice, we want to have five complete turns of the rib. In conjunction, we have the four turns of body hackle needed to complete the fly. We have to decide whether to keep with overall tradition and start the hackle behind the second turn of body rib or to follow the pattern's particular instructions of starting the hackle at the body color juncture. As hinted above, if we keep with overall tradition, we will run into the problem of tying in the hackle somewhere in the rear body section and trying to keep the silk floss free of bumps. If we keep with the pattern's instructions, the hackle will be tied in at the body color division, will not originate on the underside of the hook, and will not make four complete turns prior to being tied off. I present a method to deal with each choice, described in the following two paragraphs, respectively.

With the first option, we cannot sneak the hackle in at the floss color junction as the second turn of tinsel begins before the floss color change. So we have the possibility of building up an unsightly bump just near the front end of the rear quarter of the body. My suggestion is to start by wrapping the floss back to the butt then stop. Clip a pair of hackle pliers onto the floss and let hang. Tie the hackle in with a few firm wraps to keep it in place. Then use the remaining floss as thread to hold the hackle in place. Clip a few extra fibers off of the left side of the feather near where it will be tied in. When tying in the hackle, tie it in by the tip as usual, but in this instance tie it down along the bottom of the hook shank in between the two ribs with two tight wraps of thread with the good side of the feather facing down. Clip the waste stem. When you take that first wrap with the hackle, as long as the final turns of orange silk are tight, the feather should not slip out or twist. Be very gentle with the feather on the first two wraps.

The second option can eliminate the possibility of a bump due to tying the hackle somewhere in the rear of the body, it will also allow the hackle's tie in waste to be bound down with thread on the way to tying in the claret or red silk floss. No bump anywhere on the body (in theory)! However, the fly may look funny as the hackle will start from somewhere on the left or right side of the fly, depending on length of the fly's body. Now we have the problem of determining where the hackle needs to be tied so it will be right behind the body ribs. Here is a quick solution to our quandary. The ribs make five complete turns over the entire body. In other words, the ribs will make five complete revolutions around the body. Each revolution is 360° . So the ribs advance $5(360^\circ)$ over the course of the body. We are concerned where the ribs are at the $\frac{1}{4}$ body; that is $1800^\circ (1/4) = 450^\circ$. Therefore, the ribs will have turned a total of 450° , one complete turn plus part of another. To see how much of the second turn, we subtract one revolution, $450^\circ - 360^\circ = 90^\circ$. As the ribs start on the underside of the shank, we

will call that 0°. The ribs are one-quarter of the way through their second turn, at the middle of the hook shank. So we can tie in our hackle at the junction of the two body colors on the right side of the hook or just above the midline on the right side of the fly and feel confident the turns of ribs and hackle will line up nicely. The exact calculations can be found in Appendix 1.

Where Exactly Does This Peacock Herl Go?

The pattern recipes do not specifically state where in relation to the other underwing component the herl should lie. Though the patterns list peacock herl as the second ingredient in the underwing and as materials are usually listed in the order they are tied, suggesting the herl is to be tied in over the other material; however, there are several options. We will use herl off the peacock's eye feathers because this herl is relatively straight. With this in mind, the herl can be tied in first before the tippet fibers/feathers or claret/red hackles. The herl could be placed parallel to and above the body, leaving a slight gap between the two underwing materials. The herl could be tied in straight and slightly up, pointing towards the tail and topping. If tied in second, the herl can be placed so it rides on top of the topping fibers/feathers or claret/red hackles. The final option is to tie the herl along the middle of the other underwing material, mimicking the wing in the Rosy Dawn. Depending on where the herl is tied in, none of the herl or only the tips of the herl may be seen. This brings up the decision to possibly leave the herl out altogether.

How Solid Is Your Wing's Foundation?

A little planning can lead to a tidy tie in area for the wings. By keeping the number of thread wraps used to tie off the silk, two ribs, and a body hackle to a minimum and tying the materials off on the underside of the hook shank, a nice foundation for tying the underwing can be made. Furthermore, by flattening the stems of the underwing feather, the base for the main wing will be level. Stripping the ends of the peacock herl before tying them in strands in will continue to minimize bulk. The flat, fuzz free butt ends allow it to be tied in knife edge, butting up against the tippets or hackles. Unless the shortest golden pheasant sword feathers that are long enough are used, the useable stem is relatively thin, making it fairly easy to tie in. Considering the feather's stiffness, stripping fibers from the area where you will tie it in and putting a kink or bend in the feather shaft will tying it in.

Genuine 5th Avenue Article, Economical Knockoff/Stunt Double, or Homemade Imitation?

Cosmo's original calls for jay wing for the throat. We know from experience that getting jay wing feather with fibers anywhere near ¾" long is nigh impossible. Unless we tie this pattern on a standard shanked #2/0 or smaller hook, we need a useable and worthwhile substitute. One possibility is to use dyed saddle or schlappen hackle. These are readily available, economical, can be dyed shades to suit, and have applicable fiber lengths. Another is the blue neck/shoulder feather of the vulturine guinea fowl. It has a very nice blue color, similar to jay, and have fiber lengths appropriate for flies up to about a #5/0 standard shank length (Pryce-Tannatt style) hook. But, when the fibers are wrapped, they look pale purple from the side, and the feathers can be difficult to procure. Another suggestion is to use large natural guinea fowl flank feathers dyed somewhere between a kingfisher blue and sky blue. Depending on hook style and size, fiber lengths may become a concern. The fibers tend to max out near ¾" in length for the large spotted flank feathers. The smaller, spotted or speckled feathers can be found in a larger range of sizes, with fibers at almost 1" or longer.

Body feathers of the Kenya crested guinea fowl present another alternative. It has a shape and color similar to regular guinea fowl, except for the light blue shading to the white dots. Availability is similar to that of the vulturine neck feathers. Some searching will turn up sources (Angler's Workshop in Washington, Castle Arms in Massachusetts, or Hunter's Angling Supplies in New Hampshire). My final suggestion is to take either large white saddle or schlappen hackle and use three Sharpie pens to mark the feathers perpendicular to the stem, resulting in repeating strips of black, blue, light blue, and white.

Which Comes First: The Wing or the Throat?

The order of tying in the wing and throat will be determined by both the hook's size (and therefore wing thickness, body hackle length, and throat hackle length) and the materials selected. A fly tied on a #2/0 or smaller can use goose shoulder for the wing and jay for the throat. After tying in the wing and underwing with a minimum of material accumulation, there is plenty of room for the jay. I tried using the jay on a #2/0 after tying in the wing, leaving plenty of room at the head. I ended up with a large head consisting mostly of jay feather shaft. No fixing that mess. I could have tried splitting the jay feather, but I surmise I would be left with the same problem, just less in stature. I think that is why Gordon's original calls for black wool at the head. If jay is used, wool will be needed to cover up the large feather shaft. Using a saddle, schlappen, or guinea feather, I think you may leave less room for the head when starting. These feathers have relatively thin stems, thereby taking up less space than the jay, leading to a smaller head.

Now on the larger sized flies, about #3/0 or larger irons, jay is nigh impossible to get in the length necessary for a throat. I suppose that is why blue hackle is called for by both Kelson and Pryce-Tannatt. In this instance I do not think the wing needs to be tied in after the throat. A little planning needs to be done after you make your decision as to your order. By going throat followed by wing, you may leave less room for the head because you wrap the thread back over the stroked down throat fibers. Now set the wing directly over the throat with two to four turns of thread. You have tied two materials in the space usually taken up by one. The disadvantage here is the fly's head may be a bit larger than what you want. By going with the wing followed by throat you should finish with a small head as only the usual adornments remain. The disadvantage is you will need to leave a little more room for the head.

King Kong or Chihuahua?

How big is your fly's head? Or, how big do you want it to be? The size of this fly's head will depend most heavily on how much space you leave for it. If you really want to use jay, add another 1/16" to the set aside space. Once the wing is seated, there are only two to four materials left to tie in. The final ornamentals should be tied in with less than twenty thread wraps total. Using tippet in strands, defuzzing the herl, and selecting a thin stemmed alternative to jay, bulk in the head space should be minimal. Compared to some of the other flies we have tied, there really is not much to this fly. No body joints, body veilings, shoulders, or roofs.

Spend the time to get the tail just right, keep a thin and smooth body, be particular about tying in the underwing, select a thin stemmed throat material, set the wings carefully, add the usual final suspects, and.....finis!!



Cosmo Gordon's Original Dressing

Tag:	Silver tinsel, flat or oval, and yellow silk
Tail:	Golden pheasant crest feather
Butt:	Black ostrich herl
Ribs:	Flat silver tinsel and silver twist
Hackle:	Two claret hackles
Body:	Rear $\frac{1}{4}$ - yellow silk floss Front $\frac{3}{4}$ - claret silk floss
Throat:	Blue jay wing
Underwing:	Golden pheasant tippet fibers in strands and peacock herl
Wing:	Speckled bustard, light blue, green, and red turkey/swan/goose, Lady Amherst pheasant tail
Cheek:	Jungle cock nail feather
Topping:	Golden pheasant crest feather

Cosmo Gordon's Original Dressing

1. Tie in white thread $\frac{1}{4}$ " to $\frac{3}{8}$ " back from the blind eye. Wrap forward $\frac{1}{32}$ " to $\frac{1}{16}$ ". Cut 1" of twisted silk gut. It is your choice as to how you want to prepare the gut. The Partridge twisted silk gut is much softer and easier to flatten than the Japanese twisted silk gut. Soak the gut until it becomes as soft and pliable as you desire. Wrap the gut around a bobbin or similarly sized cylinder so that it forms a long U shape. While holding the gut against the bobbin with your left thumb, nick the gut with your right thumb and middle finger, respectively, so the gut bends inward on each side. To thin the gut out, you may chew on the ends to flatten them and/or stagger cut the three strands of the gut once tied onto the hook.



You may leave the hook in the normal upright position or turn the hook upside down when tying in the gut. Begin tying in the far side of the gut first, wrapping forward, and leaving at least $\frac{1}{8}$ " of bare hook shank exposed. Then tie in the near side, wrapping back toward the hook point.

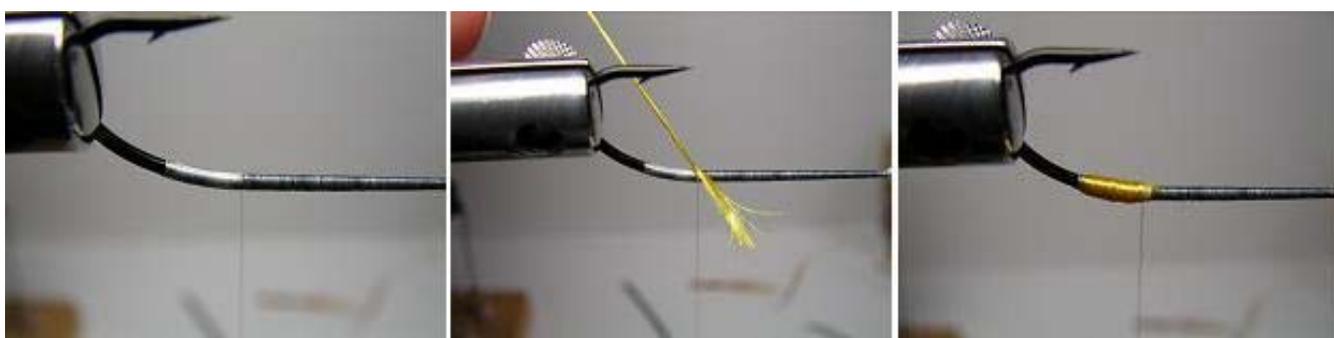
2. Turn hook point side up. Tie in a 4" piece of small oval silver tinsel along the left (near) underside of the hook with the smallest waste end possible. Holding the tinsel tightly in your non-dominant hand, wrap the thread rearward down the hook over the tinsel to a point even with the hook point. Keep the tinsel along the underside of the hook, slightly on the left (near side). Let the thread hang.



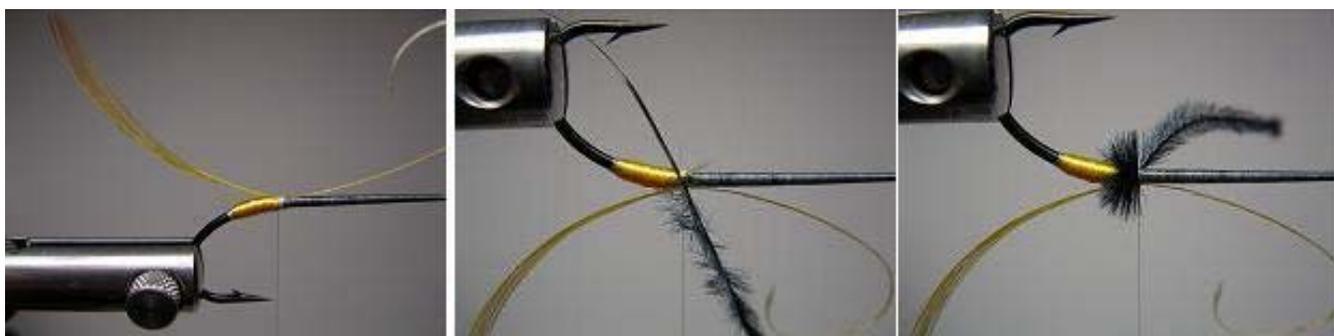
Take one wrap with the tinsel around bare shank and then over the thread base. Make three or four total wraps. Tie off the tinsel on the underside of the shank with two thread wraps. Wrap over the remaining waste tinsel strand with the thread, keeping the tinsel along the right (far) underside of the shank. Trim the tinsel flush with the tinsel tie in point.



Tie in a 6" section of yellow silk on the underside of the shank. Wrap the silk back edge to edge, and then wrap forward, overlapping each wrap by half. Tie off on the underside of the shank with one or two thread wraps.



3. Select and prepare a golden pheasant crest feather that matches both the length and the curvature of the tail you drew out. Tie in the crest with two to four forward wraps. Select a black ostrich herl with long barbules. Remove some barbules near the butt end of the herl shaft. Take off one or two turns of thread. Tie in the herl on the underside of the hook with one or two forward wraps of thread, making sure the herl is positioned with the barbules pointing towards the rear when wrapped forward. Wrap the herl three or four times forward to make a butt of about 1/16" wide. Tie off with two or three thread wraps. Clip the three waste ends: crest, silk, and ostrich. Wrap the thread edge to edge until butting up against the gut ends.

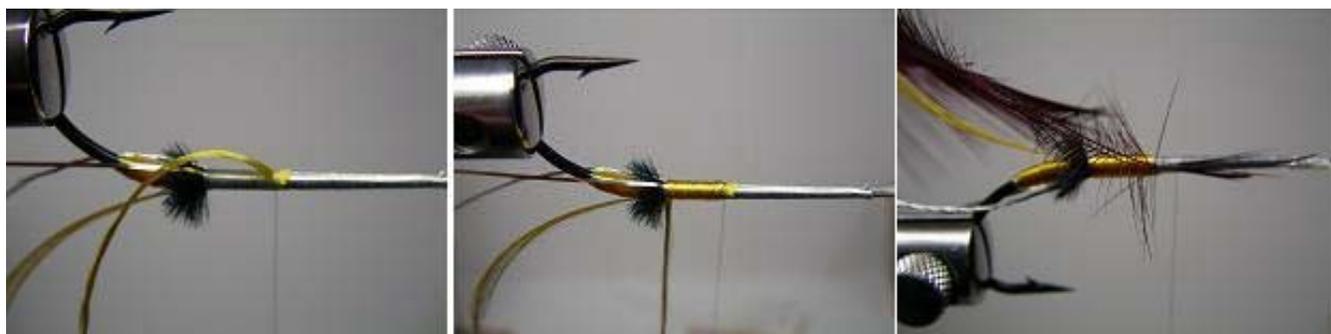


4. Cut a 5½" section of both flat silver tinsel and silver twist. Turn the hook so that the hook is upside down. The ribs should be tied in with the flat tinsel along the left underside (near) and the twist along the right underside (far). Tie in the ribs with the ends of the ribs butting up against the gut ends. Hold the ribs tightly with your non-dominant hand. Wrap the

thread over the ribs edge to edge back to the butt. Now is the time and place to make a tapered body with white floss if you choose to do so.



5. Wrap the thread to the $\frac{1}{4}$ body division and tie in a $4\frac{1}{2}$ " length of yellow floss with one to three wraps of thread on the underside of the shank. Wrap the yellow floss back edge to edge until it evenly butts up against the ostrich herl. Wrap the floss forward, overlapping every wrap by half. Then unwrap the thread used to tie in the silk. Now tie the silk floss off with one or two wraps on the underside of the hook shank. Clip the waste end. Select two claret saddle hackles with a nice taper to the barbs. Fold the hackles. Tie in two hackles in the middle of the right side of the hook shank if using rear $\frac{1}{4}$ of the body or in the middle of the left side if using rear $\frac{1}{3}$ of the body.



6. Wrap the thread forward to the gut ends. Leave about a $\frac{1}{4}$ " space at the front of the fly for the wing, throat/collar, and ornamentals. Tie in a 10" length of claret floss on the underside of the hook shank. Wrap the claret floss edge to edge back to the yellow floss, and then wrap forward overlapping each wrap by half. Tie off with two or three thread wraps on the underside of the hook shank. Clip the silk waste end. Bring the flat tinsel forward first, then bring the twist forward along the trailing edge of the flat tinsel. Take one or two thread wraps off. Tie off with two to three thread wraps on the underside of the hook shank. Add a drop of cement at this juncture if you choose. Bring the claret hackles forward together along the trailing edge of the twist. Take one or two thread wraps off. Tie the hackles off with two or three thread wraps on the underside of the shank.



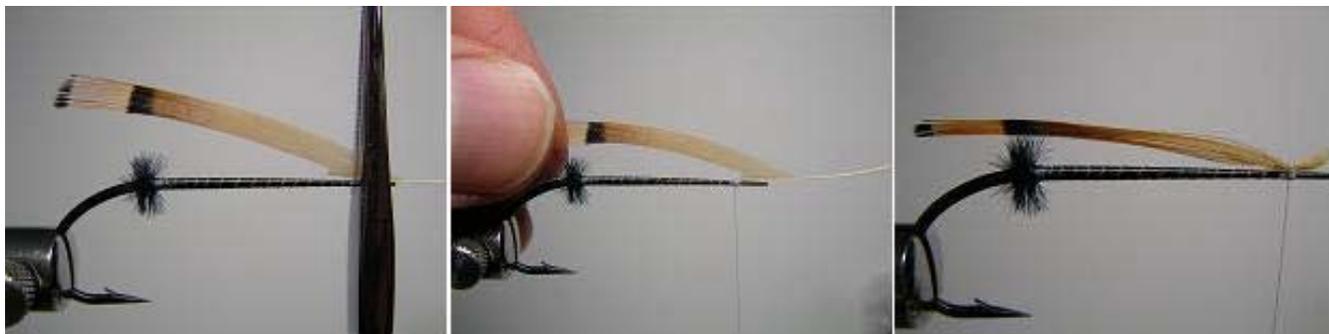
Clip the four waste ends: both ribs and both hackles. Begin folding the hackle fibers below the hook shank. Clip any errant barbs that refuse to cooperate. Pull the last wrap of the hackle down and back. Take one or two wraps of thread over the top of the hackle to keep it swept down and create a flat surface for tying in the underwing.



7. Select a matched pair of golden pheasant tippet feathers that, when tied in, are long enough for the second bar of the feather to lie above the butt. These can be tied in as strands or as whole feathers. Select which feather will be right and left. If tying in as strands, remove the fibers on bottom of both feathers. Cut the stem at the point where the fibers are not long enough for the second bar of the feather to reach the butt.



Remove some of the remaining fibers, from the butt end of the feather, such that only a 1/4" thick strip of fibers remains on each feather. Position the feathers such that cut end of the stem lies just on the head side of the tie in point. Make two soft loop wraps and slowly cinch down. The stem helps to keep all the fibers from spreading out like spun deer hair when tied down. Make one or two more firm wraps. As no stem was tied in, a flat base is kept for tying in the peacock herl.



If tying in whole feathers, strip all the short and unmarked fibers that originate near the butt end of the feather. Place the feathers back to back, put a bend in the stems where they will be tied in, and position above the tie in point. Check that the second black bar of both feathers lines up with the butt, make two soft loop wraps, and cinch slowly. Reposition as necessary. Make two tight wraps once you are pleased with the set. Now is a good time to add a drop of cement if you choose to do so.

Since this is an underwing, herl from the eyed tail feathers would probably be better than herl from the sword feathers. Before tying in, try to strip away some of the fuzz from the area on the strands of herl where you will tie them in. Take one or two thread wraps off. Tie in two or three strands of peacock herl per side (four to six strands total) on top of the tippet with two to four wraps of thread. Clip the tippet and herl waste ends. Switch to black thread now, if you prefer.



8. Select the components for the main wing. Bottom to top: speckled bustard; light blue, light green, and red/claret turkey/swan/goose; and Lady Amherst tail. The following is just a guideline. Feel free to use fewer or more fibers for each married section. The following number of fibers is from my experience and materials. On a smaller size fly (shorter shank or less than 2/0), go with three fibers each. On a larger size fly (longer shank or large than a 2/0), use four fibers each. On a 5/0 or larger, use five fibers each. The left side of a feather from the left side of the bird goes on the fly's left wing. The right side of a feather from the right side of the bird goes on the fly's right wing. Cut fibers for both sides and marry.



9. Hold the married wings, back to back, in your nondominant hand and hump the front portion of the wing with your other hand. Lay the left wing in the palm of your dominant hand (good side down) and then lay the right wing (good side up) on top of the left wing. Pinch the two wings together just behind where they will be tied in with the thumb and middle finger of your nondominant hand, pick them up forming an upside down boat or A-frame house shape, and place them on the fly. Position as necessary. Pinch and hold tightly with your nondominant hand. Make two soft loops of thread around the wing. Pull slowly down (completing the second soft loop) or up (starting a third loop around the wing). As the wing fibers begin to compress, grasp the waste ends at their base with your dominant hand and gently bend them up. This produces a pronounced kink or bend in the wing, helping the thread cinch down. Pull on the bobbin to take up slack thread. Repeat bending the waste ends and pulling up the slack thread until you feel the thread is tight. Relax your nondominant hand and let go. Reposition the wing as you feel necessary. Take off the thread wraps and remount the wing if need be. Hold the wing with your nondominant hand and lift the butt ends up with your dominant hand to set the wing even lower. The fibers on the wing and waste side balance on this point like a teeter totter; when one end goes up, the other end of the lever goes down. When satisfied with the wing's position, make two to five tight wraps close together or on top of each other. This is the time to add a drop of cement if you so choose. Let the cement dry for a good fifteen to twenty minutes. No need to rush this critical step. Carefully clip the waste ends. It is best if they are trimmed one fiber at a time. It is tedious, but your wing and other adornments are less likely to shift otherwise.



10. Prepare a blue hackle, saddle, or schlappen of your choice, or, if size allows, a jay wing feather. Tie the throat feather in on the underside of the hook with two or three wraps of thread. Take two to four wraps and tie off on the underside of the hook shank. Trim the waste end. Select and prepare the jungle cock eyes. Unwind one or two thread wraps and tie in the jungle cock with one to three thread wraps. Select a topping to match the length and curvature

of the one you drew out. Strip the excess fibers, flatten the stem, and tie in with one to three thread wraps. Trim the jungle cock and topping waste ends. Dub 1½ inches of thread with the black dubbing of your choice or tie in a 2 inch piece of thin, black wool. Make a nice thread head, whip finish, clip, and cement. Done!!



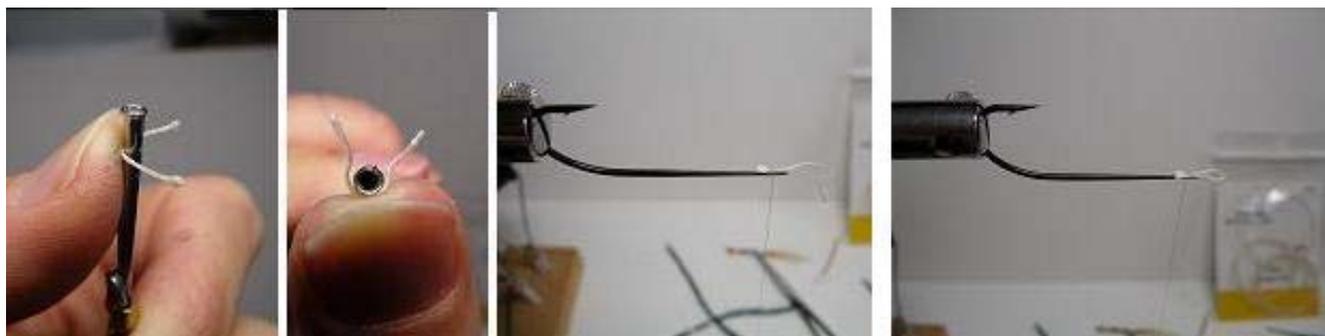


Kelson's Dressing #1

Tag:	Silver twist and yellow silk
Tail:	A topping
Butt:	Black herl
Body:	One-third yellow silk, and two-thirds claret silk
Ribs:	Silver lace and silver tinsel (flat)
Hackle:	Two claret hackles, from yellow silk
Throat:	Blue hackle
Wings:	Two red golden pheasant sword feathers and two tippet feathers, bustard, swan dyed light blue, light green and red claret, Amherst pheasant tail, and a topping
Sides:	Jungle cock
Head:	Black thread

Kelson's Dressing #1

1. Tie in white thread $\frac{1}{4}$ " to $\frac{3}{8}$ " back from the blind eye. Wrap forward $\frac{1}{32}$ " to $\frac{1}{16}$ ". Cut 1" of twisted silk gut. It is your choice as to how you want to prepare the gut. The Partridge twisted silk gut is much softer and easier to flatten than the Japanese twisted silk gut. Soak the gut until it becomes as soft and pliable as you desire. Wrap the gut around a bobbin or similarly sized cylinder so that it forms a long U shape. While holding the gut against the bobbin with your left thumb, nick the gut with your right thumb and middle finger, respectively, so the gut bends inward on each side. To thin the gut out, you may chew on the ends to flatten them and/or stagger cut the three strands of the gut once tied onto the hook.



You may leave the hook in the normal upright position or turn the hook upside down when tying in the gut. Begin tying in the far side of the gut first, wrapping forward, and leaving at least $\frac{1}{8}$ " of bare hook shank exposed. Then tie in the near side, wrapping back toward the hook point.

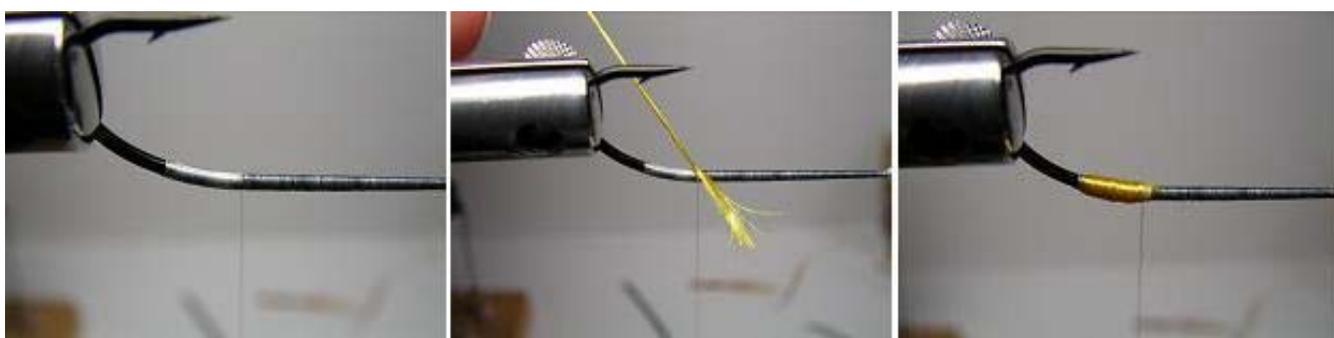
2. Turn hook point side up. Tie in a 4" piece of small oval silver tinsel along the left (near) underside of the hook with the smallest waste end possible. Holding the tinsel tightly in your non-dominant hand, wrap the thread rearward down the hook over the tinsel to a point even with the hook point. Keep the tinsel along the underside of the hook, slightly on the left (near side). Let the thread hang.



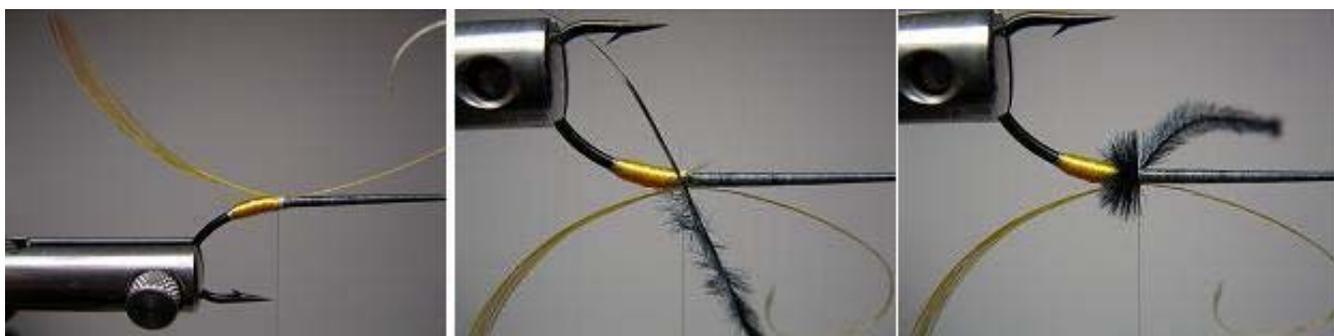
Take one wrap with the tinsel around bare shank and then over the thread base. Make three or four total wraps. Tie off the tinsel on the underside of the shank with two thread wraps. Wrap over the remaining waste tinsel strand with the thread, keeping the tinsel along the right (far) underside of the shank. Trim the tinsel flush with the tinsel tie in point.



Tie in a 6" section of yellow silk on the underside of the shank. Wrap the silk back edge to edge, and then wrap forward, overlapping each wrap by half. Tie off on the underside of the shank with one or two thread wraps.



3. Select and prepare a golden pheasant crest feather that matches both the length and the curvature of the tail you drew out. Tie in the crest with two to four forward wraps. Select a black ostrich herl with long barbules. Remove some barbules near the butt end of the herl shaft. Take off one or two turns of thread. Tie in the herl on the underside of the hook with one or two forward wraps of thread, making sure the herl is positioned with the barbules pointing towards the rear when wrapped forward. Wrap the herl three or four times forward to make a butt of about 1/16" wide. Tie off with two or three thread wraps. Clip the three waste ends: crest, silk, and ostrich. Wrap the thread edge to edge until butting up against the gut ends.

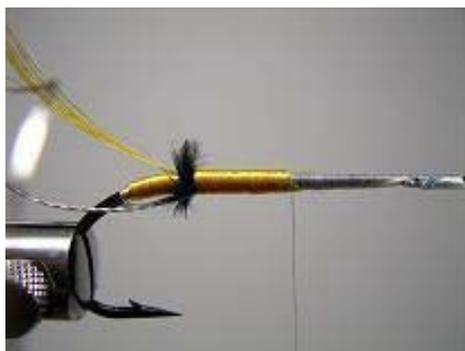


4. Cut a 5½" section of both flat silver tinsel and silver twist. Turn the hook so that the hook is upside down. The ribs should be tied in with the flat tinsel along the left underside (near) and the twist along the right underside (far). Tie in the ribs with the ends of the ribs butting up against the gut ends. Hold the ribs tightly with your non-dominant hand. Wrap the

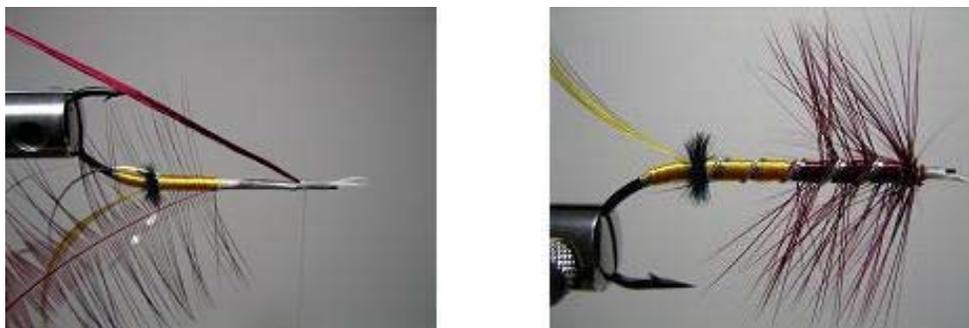
thread over the ribs edge to edge back to the butt. Now is the time and place to make a tapered body with white floss if you choose to do so.



5. Wrap the thread to the $\frac{1}{4}$ body division and tie in a $4\frac{1}{2}$ " length of yellow floss with one to three wraps of thread on the underside of the shank. Wrap the yellow floss back edge to edge until it evenly butts up against the ostrich herl. Wrap the floss forward, overlapping every wrap by half. Then unwrap the thread used to tie in the silk. Now tie the silk floss off with one or two wraps on the underside of the hook shank. Clip the waste end. Select two claret saddle hackles with a nice taper to the barbs. Fold the hackles. Tie in two hackles in the middle of the right side of the hook shank if using rear $\frac{1}{4}$ of the body or in the middle of the left side if using rear $\frac{1}{3}$ of the body.



6. Wrap the thread forward to the gut ends. Leave about a $\frac{1}{4}$ " space at the front of the fly for the wing, throat/collar, and ornamentals. Tie in a 10" length of claret floss on the underside of the hook shank. Wrap the claret floss edge to edge back to the yellow floss, and then wrap forward overlapping each wrap by half. Tie off with two or three thread wraps on the underside of the hook shank. Clip the silk waste end. Bring the flat tinsel forward first, then bring the twist forward along the trailing edge of the flat tinsel. Take one or two thread wraps off. Tie off with two to three thread wraps on the underside of the hook shank. Add a drop of cement at this juncture if you choose. Bring the claret hackle forward together along the trailing edge of the twist. Take one or two thread wraps off. Tie the hackle off with two or three thread wraps on the underside of the shank. Clip the three waste ends: both ribs and hackle. Begin folding the hackle fibers below the hook shank. Clip any errant barbs that refuse to cooperate. Pull the last wrap of the hackle down and back. Take one or two wraps of thread over the top of the hackle to keep it swept down and create a flat surface for tying in the underwing.



7. Select a matched pair of golden pheasant tail sword feathers that, when tied in, are long enough to reach from the tail/topping junction. If you choose to tie in the tippet in strands, see step 7 under tying instructions for the original Gordon. How far back they are tied in is your choice. Try to use feathers that are long enough and have very fine stems. Strip waste fibers from the stem so you are tying over bare stem. Place above the body, make two soft loop wraps, and slowly cinch down. When pleased with their positions, make one or two more firm wraps. Select a matched pair of golden pheasant tippet feathers that, when tied in, are long enough for the second bar of the feather to lie above the butt. Select which feather will be right and left. Strip all the short and unmarked fibers that originate near the butt end of the feather. Place the feathers back to back, put a bend in the stems where they will be tied in, and position above the tie in point. Check that the second black bar of both feathers lines up with the butt, make two soft loop wraps, and cinch slowly. Reposition as necessary. Make two tight wraps once you are pleased with the set. Now is a good time to add a drop of cement if you choose to do so. Clip the tippet and sword waste ends. Switch to black thread now, if you prefer.



8. Select the components for the main wing. Bottom to top: speckled bustard; light blue, light green, and red/claret turkey/swan/goose; and Lady Amherst tail. The following is just a guideline. Feel free to use fewer or more fibers for each married section. The following number of fibers is from my experience and materials. On a smaller size fly (shorter shank or less than 2/0), go with three fibers each. On a larger size fly (longer shank or large than a 2/0), use four fibers each. On a 5/0 or larger, use five fibers each. The left side of a feather from the left side of the bird goes on the fly's left wing. The right side of a feather from the right side of the bird goes on the fly's right wing. Cut fibers for both sides and marry..



9. Hold the married wings, back to back, in your nondominant hand and hump the front portion of the wing with your other hand. Lay the left wing in the palm of your dominant hand (good side down) and then lay the right wing (good side up) on top of the left wing. Pinch the two wings together just behind where they will be tied in with the thumb and middle finger of your nondominant hand, pick them up forming an upside down boat or A-frame house shape, and place them on the fly. Position as necessary. Pinch and hold tightly with your nondominant hand. Make two soft loops of thread around the wing. Pull slowly down (completing the second soft loop) or up (starting a third loop around the wing). As the wing fibers begin to compress, grasp the waste ends at their base with your dominant hand and gently bend them up. This produces a pronounced kink or bend in the wing, helping the thread cinch down. Pull on the bobbin to take up slack thread. Repeat bending the waste ends and pulling up the slack thread until you feel the thread is tight. Relax your nondominant hand and let go. Reposition the wing as you feel necessary. Take off the thread wraps and remount the wing if need be. Hold the wing with your nondominant hand and lift the butt ends up with your dominant hand to set the wing even lower. The fibers on the wing and waste side balance on this point like a teeter totter; when one end goes up, the other end of the lever goes down. When satisfied with the wing's position, make two to five tight wraps close together or on top of each other. This is the time to add a drop of cement if you so choose. Let the cement dry for a good fifteen to twenty minutes. No need to rush this critical step. Carefully clip the waste ends. It is best if they are trimmed one fiber at a time. It is tedious, but your wing and other adornments are less likely to shift otherwise.



10. Prepare a blue hackle, saddle, or schlappen of your choice, or, if size allows, a jay wing feather. Tie the throat feather in on the underside of the hook with two or three wraps of thread. Take two to four wraps and tie off on the underside of the hook shank. Trim the waste end. Select and prepare the jungle cock eyes. Unwind one or two thread wraps and tie in the jungle cock with one to three thread wraps. Select a topping to match the length and curvature

of the one you drew out. Strip the excess fibers, flatten the stem, and tie in with one to three thread wraps. Trim the jungle cock and topping waste ends. Make a nice thread head, whip finish, clip, and cement. Done!!



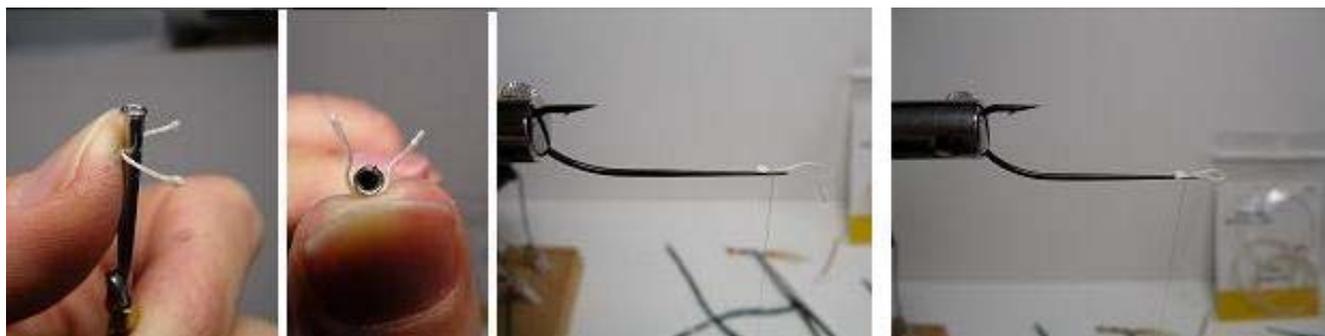


Kelson's Dressing #2

Tag:	Silver twist and yellow silk
Tail:	A topping and tippet fibers
Butt:	Black herl
Body:	One-third yellow silk, and two-thirds claret silk
Ribs:	Silver lace and silver tinsel (flat)
Hackle:	Two claret hackles, from yellow silk
Throat:	Blue hackle
Wings:	A pair of red hackles or golden pheasant sword feathers, peacock herl, bustard, swan dyed light blue, light green and red claret, Amherst pheasant tail, and a topping
Sides:	Jungle cock
Head:	Black wool

Kelson's Dressing #2

1. Tie in white thread $\frac{1}{4}$ " to $\frac{3}{8}$ " back from the blind eye. Wrap forward $\frac{1}{32}$ " to $\frac{1}{16}$ ". Cut 1" of twisted silk gut. It is your choice as to how you want to prepare the gut. The Partridge twisted silk gut is much softer and easier to flatten than the Japanese twisted silk gut. Soak the gut until it becomes as soft and pliable as you desire. Wrap the gut around a bobbin or similarly sized cylinder so that it forms a long U shape. While holding the gut against the bobbin with your left thumb, nick the gut with your right thumb and middle finger, respectively, so the gut bends inward on each side. To thin the gut out, you may chew on the ends to flatten them and/or stagger cut the three strands of the gut once tied onto the hook.

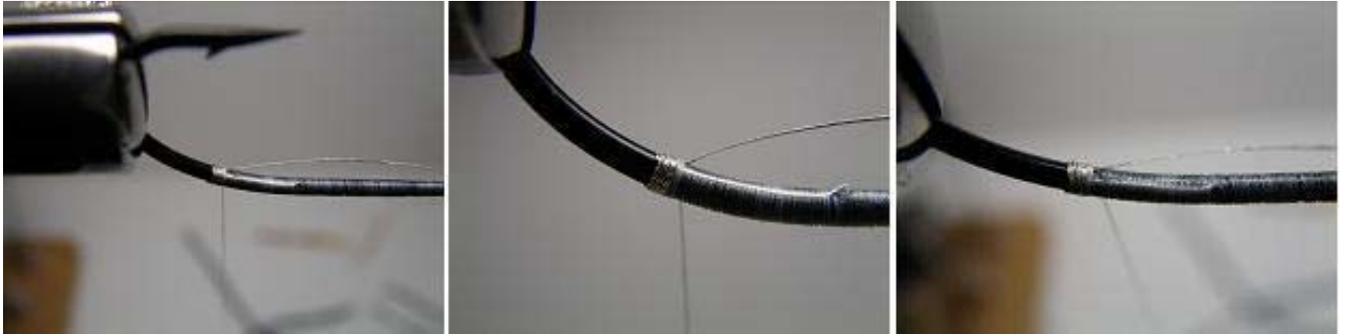


You may leave the hook in the normal upright position or turn the hook upside down when tying in the gut. Begin tying in the far side of the gut first, wrapping forward, and leaving at least $\frac{1}{8}$ " of bare hook shank exposed. Then tie in the near side, wrapping back toward the hook point.

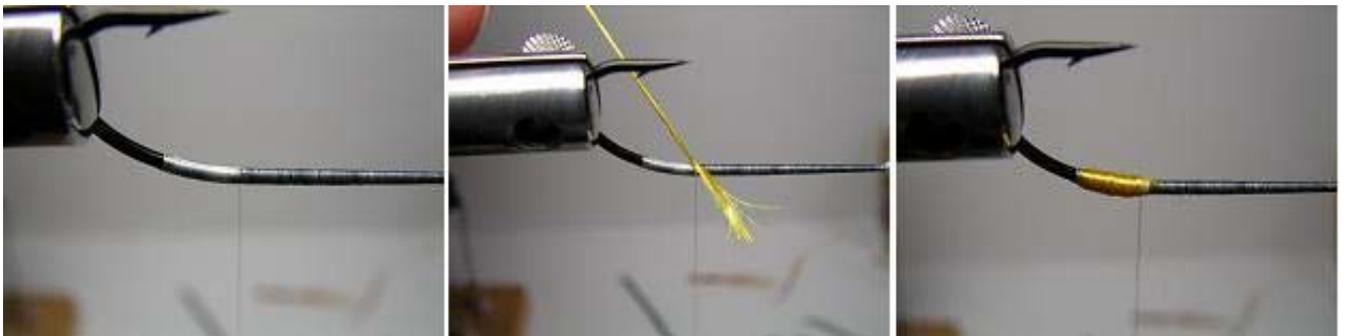
2. Turn hook point side up. Tie in a 4" piece of small oval silver tinsel along the left (near) underside of the hook with the smallest waste end possible. Holding the tinsel tightly in your non-dominant hand, wrap the thread rearward down the hook over the tinsel to a point even with the hook point. Keep the tinsel along the underside of the hook, slightly on the left (near side). Let the thread hang.



Take one wrap with the tinsel around bare shank and then over the thread base. Make three or four total wraps. Tie off the tinsel on the underside of the shank with two thread wraps. Wrap over the remaining waste tinsel strand with the thread, keeping the tinsel along the right (far) underside of the shank. Trim the tinsel flush with the tinsel tie in point.



Tie in a 6" section of yellow silk on the underside of the shank. Wrap the silk back edge to edge, and then wrap forward, overlapping each wrap by half. Tie off on the underside of the shank with one or two thread wraps.



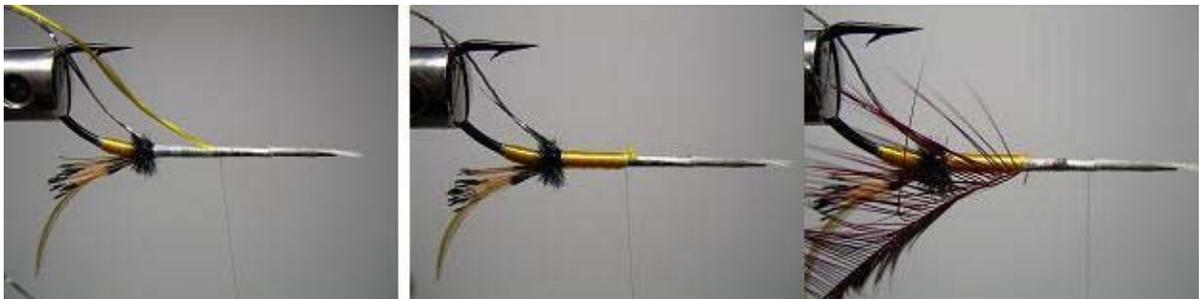
3. Select and prepare a golden pheasant crest feather that matches both the length and the curvature of the tail you drew out. Tie in the crest with two to four forward wraps. Tie in the crest with two to four wraps of thread forward. The tippet feather fibers can be tied in as one group of loose fibers or tied in as a small section of strands on each side are equally appropriate. Pull about 10 fibers from a small to medium tippet feather. If tying in the tippet in strands, use trimmed and prepared portions from the tippets. The tippet fibers should extend back somewhere between the tip of the barb of the hook and the end of the hook bend. Tie in with two soft loop wraps and slowly cinch tight. Make one or two tight wraps to secure. Select a black ostrich herl with long barbules. Remove some barbules near the butt end of the herl shaft. Take off one or two turns of thread. Tie in the herl on the underside of the hook with one or two forward wraps of thread, making sure the herl is positioned with the barbules pointing towards the rear when wrapped forward. Wrap the herl three or four times forward to make a butt of about 1/16" wide. Tie off with two or three thread wraps. Clip the three waste ends: crest, silk, and ostrich. Wrap the thread edge to edge until butting up against the gut ends.



4. Cut a 5½" section of both flat silver tinsel and silver twist. Turn the hook so that the hook is upside down. The ribs should be tied in with the flat tinsel along the left underside (near) and the twist along the right underside (far). Tie in the ribs with the ends of the ribs butting up against the gut ends. Hold the ribs tightly with your non-dominant hand. Wrap the thread over the ribs edge to edge back to the butt. Now is the time and place to make a tapered body with white floss if you choose to do so.



5. Wrap the thread to the ¼ body division and tie in a 4½" length of yellow floss with one to three wraps of thread on the underside of the shank. Wrap the yellow floss back edge to edge until it evenly butts up against the ostrich herl. Wrap the floss forward, overlapping every wrap by half. Then unwrap the thread used to tie in the silk. Now tie the silk floss off with one or two wraps on the underside of the hook shank. Clip the waste end. Select two claret saddle hackles with a nice taper to the barbs. Fold the hackles. Tie in two hackles in the middle of the right side of the hook shank if using rear ¼ of the body or in the middle of the left side if using rear ⅓ of the body.



6. Wrap the thread forward to the gut ends. Leave about a ¼" space at the front of the fly for the wing, throat/collar, and ornamentals. Tie in a 10" length of claret floss on the underside of the hook shank. Wrap the claret floss edge to edge back to the yellow floss, and then wrap

forward overlapping each wrap by half. Tie off with two or three thread wraps on the underside of the hook shank. Clip the silk waste end. Bring the flat tinsel forward first, then bring the twist forward along the trailing edge of the flat tinsel. Take one or two thread wraps off. Tie off with two to three thread wraps on the underside of the hook shank. Add a drop of cement at this juncture if you choose. Bring the claret hackle forward together along the trailing edge of the twist. Take one or two thread wraps off. Tie the hackle off with two or three thread wraps on the underside of the shank. Clip the three waste ends: both ribs and hackle. Begin folding the hackle fibers below the hook shank. Clip any errant barbs that refuse to cooperate. Pull the last wrap of the hackle down and back. Take one or two wraps of thread over the top of the hackle to keep it swept down and create a flat surface for tying in the underwing.



7. Select a matched pair of light claret saddle hackle feathers when tied in are long enough to be just shy of the tail and topping junction. Tie in with two soft loop wraps and slowly cinch down. Make two tight wraps to secure the feathers. Since this is an underwing, herl from the eyed tail feathers would probably be better than herl from the sword feathers. Before tying in, try to strip away some of the fuzz from the area on the strands of herl where you will tie them in. Take one or two thread wraps off. Tie in two or three strands of peacock herl per side (four to six strands total) on top of the hackles with two to four wraps of thread. Clip the saddle and herl waste ends. Switch to black thread now, if you prefer.



8. Select the components for the main wing. Bottom to top: speckled bustard; light blue, light green, and red/claret turkey/swan/goose; and Lady Amherst tail. The following is just a guideline. Feel free to use fewer or more fibers for each married section. The following number of fibers is from my experience and materials. On a smaller size fly (shorter shank or less than 2/0), go with three fibers each. On a larger size fly (longer shank or large than a 2/0), use four fibers each. On a 5/0 or larger, use five fibers each. The left side of a feather from the left side of the bird goes on the fly's left wing. The right side of a feather from the right side of the bird goes on the fly's right wing. Cut fibers for both sides and marry.



9. Hold the married wings, back to back, in your nondominant hand and hump the front portion of the wing with your other hand. Lay the left wing in the palm of your dominant hand (good side down) and then lay the right wing (good side up) on top of the left wing. Pinch the two wings together just behind where they will be tied in with the thumb and middle finger of your nondominant hand, pick them up forming an upside down boat or A-frame house shape, and place them on the fly. Position as necessary. Pinch and hold tightly with your nondominant hand. Make two soft loops of thread around the wing. Pull slowly down (completing the second soft loop) or up (starting a third loop around the wing). As the wing fibers begin to compress, grasp the waste ends at their base with your dominant hand and gently bend them up. This produces a pronounced kink or bend in the wing, helping the thread cinch down. Pull on the bobbin to take up slack thread. Repeat bending the waste ends and pulling up the slack thread until you feel the thread is tight. Relax your nondominant hand and let go. Reposition the wing as you feel necessary. Take off the thread wraps and remount the wing if need be. Hold the wing with your nondominant hand and lift the butt ends up with your dominant hand to set the wing even lower. The fibers on the wing and waste side balance on this point like a teeter totter; when one end goes up, the other end of the lever goes down. When satisfied with the wing's position, make two to five tight wraps close together or on top of each other. This is the time to add a drop of cement if you so choose. Let the cement dry for a good fifteen to twenty minutes. No need to rush this critical step. Carefully clip the waste ends. It is best if they are trimmed one fiber at a time. It is tedious, but your wing and other adornments are less likely to shift otherwise.



10. Prepare a blue hackle, saddle, or schlappen of your choice, or, if size allows, a jay wing feather. Tie the throat feather in on the underside of the hook with two or three wraps of thread. Take two to four wraps and tie off on the underside of the hook shank. Trim the waste end. Select and prepare the jungle cock eyes. Unwind one or two thread wraps and tie in the jungle cock with one to three thread wraps. Select a topping to match the length and curvature of the one you drew out. Strip the excess fibers, flatten the stem, and tie in with one to three thread wraps. Unwind one or two thread wraps, and tie in a macaw tail feather fiber on each

side as a horn with one or two thread wraps. Make a nice thread head, whip finish, clip, and cement. Done!!





Pryce-Tannatt's Dressing

(hook 1¼" to 3")

Tag: Silver tinsel

Tail: A topping and Indian Crow

Butt: Black herl

Body: First quarter, light orange floss; remainder, ruby red floss

Ribs: Flat silver tinsel and twist

Hackle: A claret hackle

Throat: A light blue hackle

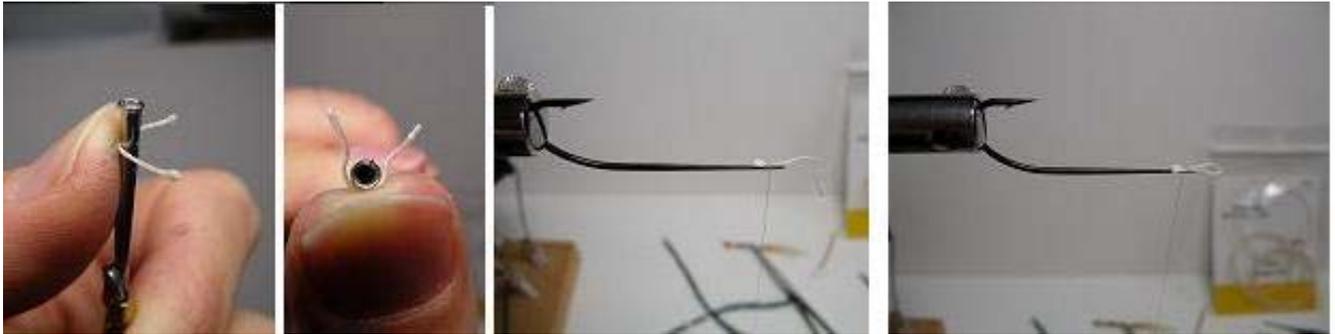
Wings: Mixed – a pair of bright red hackles (back to back) or of Golden Pheasant sword feathers (in larger sizes); strands of Peacock herl; "married" strands of orange, scarlet, and blue Swan, Golden pheasant tail, and Bustard

Cheeks: Tippets (small), and Jungle cock over; a topping over all

Horns: Blue and Yellow Macaw

Pryce-Tannatt's Dressing

1. Tie in white thread $\frac{1}{4}$ " to $\frac{3}{8}$ " back from the blind eye. Wrap forward $\frac{1}{32}$ " to $\frac{1}{16}$ ". Cut 1" of twisted silk gut. It is your choice as to how you want to prepare the gut. The Partridge twisted silk gut is much softer and easier to flatten than the Japanese twisted silk gut. Soak the gut until it becomes as soft and pliable as you desire. Wrap the gut around a bobbin or similarly sized cylinder so that it forms a long U shape. While holding the gut against the bobbin with your left thumb, nick the gut with your right thumb and middle finger, respectively, so the gut bends inward on each side. To thin the gut out, you may chew on the ends to flatten them and/or stagger cut the three strands of the gut once tied onto the hook.



You may leave the hook in the normal upright position or turn the hook upside down when tying in the gut. Begin tying in the far side of the gut first, wrapping forward, and leaving at least $\frac{1}{8}$ " of bare hook shank exposed. Then tie in the near side, wrapping back toward the hook point.

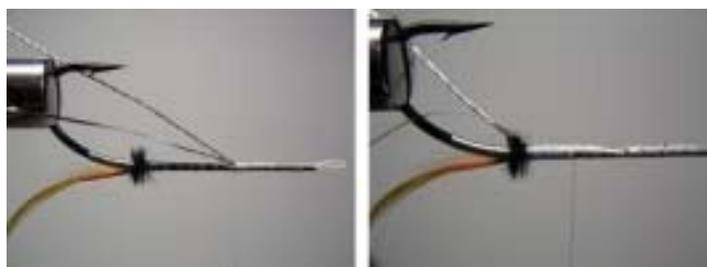
2. Wrap the thread, edge to edge, down the shank until the hanging thread is exactly even with the hook point. Now take two or three additional wraps of thread. Tie in a $3\frac{1}{2}$ " piece of medium flat silver tinsel with two to five turns of thread on the underside of the hook shank, such that the tag end is pointing down, forward, and away from you and the usable end is pointing up, back, and toward you. Wrap the tinsel down the bend of the hook until it is just short of being even with the barb of the hook. Take one more wrap so that the aft end of this last wrap of tinsel is even with the barb of the hook. When taking this last wrap, wind over the top of hook bend and when underneath the bend, change wrapping direction and make edge to edge turns toward the hook eye. Once you reach the point where the fore edge of your tinsel is even with the waste end of the tinsel, take as many wraps of thread off as you used to tie the tinsel in. Clip the waste end and smooth any remaining stub. Make one more forward turn of the tinsel. Tie off with one or two wraps of thread.



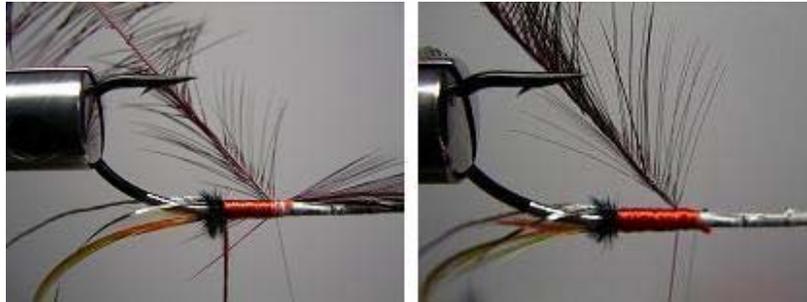
3. Select and prepare a golden pheasant crest feather that matches both the length and the curvature of the tail you drew out. Tie in the crest with two to four forward wraps of thread. Select a feather of proper length from a Creekside Genuine Imitation Indian Crow cape and darken the butt end with a black permanent marker. Take off one or two thread wraps. Tie in with two to four wraps of thread, wrapping back. Select a black ostrich herl with long barbules. Remove some barbules near the butt end of the herl shaft. Take off one or two turns of thread. Tie in the herl on the underside of the hook with one or two forward wraps of thread, making sure the herl is positioned with the barbules pointing towards the rear when wrapped forward. Wrap the herl three or four times forward to make a butt of about 1/16" wide. Tie off with two or three thread wraps. Clip the three waste ends: crest, crow, and ostrich. Wrap the thread edge to edge until butting up against the gut ends.



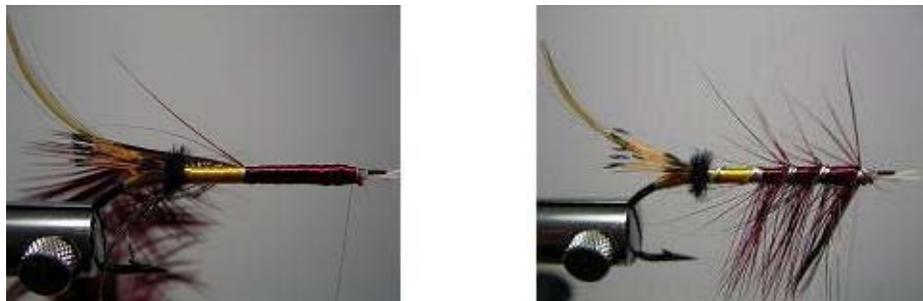
4. Cut a 5½" section of both flat silver tinsel and silver twist. Turn the hook so that the hook is upside down. The ribs should be tied in with the flat tinsel along the left underside (near) and the twist along the right underside (far). Tie in the ribs with the ends of the ribs butting up against the gut ends. Hold the ribs tightly with your non-dominant hand. Wrap the thread over the ribs edge to edge back to the butt. Now is the time and place to make a tapered body with white floss if you choose to do so.



5. Select a claret saddle hackle with a nice taper to the barbs. Wrap the thread to the $\frac{1}{4}$ body division and tie in a $4\frac{1}{2}$ " length of orange floss with one to three wraps of thread. Wrap the orange floss back edge to edge so it evenly butts up against the ostrich herl. Attach your hackle pliers to the end of the floss and let hang. Now tie in the hackle where the silk begins on the underside of the hook with three solid thread wraps. Loosely wrap over the hackle with the thread back to the $\frac{1}{5}$ body division. Pick up the hanging orange silk and wrap tightly forward, overlapping every wrap by half. When the silk meets the hackle, take two wraps of silk over the hackle stem. Then unwrap the thread back to the hackle tie in point. Continue with the orange floss and tie off with two wraps. Clip the floss waste end.

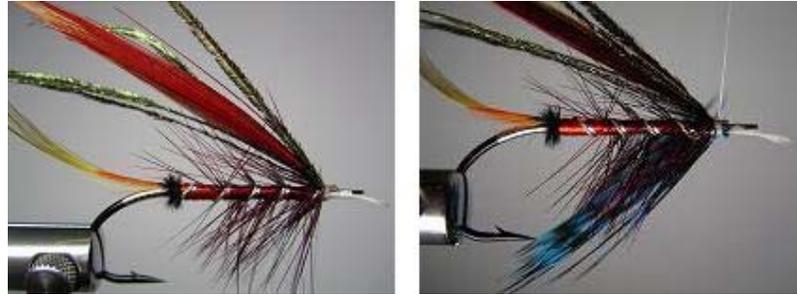


6. Wrap the thread forward to the gut ends. Leave about a $\frac{1}{4}$ " space at the front of the fly for the wing, throat/collar, and ornamentals. Tie in a 10" inch length of red floss. Wrap the red floss, edge to edge, back to the orange floss, and wrap forward overlapping every wrap by half. Tie off with two or three thread wraps. Bring the flat tinsel forward first, then bring the twist forward along the trailing edge of the flat tinsel. Take one or two thread wraps off. Tie off with two to three thread wraps on the underside of the hook shank. Add a drop of cement at this juncture if you choose. Bring the claret hackle forward together along the trailing edge of the twist. Take one or two thread wraps off. Tie the hackle off with two or three thread wraps. Clip the three waste ends: flat, oval, and hackle. Begin folding the hackle fibers below the hook shank. Cut or pull any errant barbs that refuse to cooperate. Pull the last wrap of the hackle down and back. Take one or two wraps of thread over the top of the hackle to keep it swept down and keep a flat surface for tying in the underwing. Switch to black thread now, if you prefer.



7. Prepare a pair of red saddle hackles or try a pair of golden pheasant tail swords. The stems of the swords get thick very quickly! You may wish to strip off slightly more barbs than you need to and put a small nick into the hackle stem. This nick and resulting bend, once tied in, will cause the hackle to lie parallel to and nearly on top of the body. Tie in with two to four

thread wraps. Now is a good time to add a drop of cement if you choose. Since this is an underwing, herl from the eyed tail feathers would probably be better than herl from the sword feathers. Before tying in, try to strip away some of the fuzz from the area on the strands of herl where you will tie them in. This will create a better area for tying in the wing. First, there will not be any green fuzz sticking out to create an irregular tying surface. Secondly, the stripped peacock will tie in very flat and will not take up much space. Take one or two thread wraps off. Tie in two or three strands of peacock herl per side (four to six strands total) on top of the hackles with two to four wraps of thread. Clip the saddle and herl waste ends. Switch to black thread now, if you prefer.



8. Select the components for the main wing. Bottom to top: speckled bustard; light blue, light green, and red/claret turkey/swan/goose; and Lady Amherst tail. The following is just a guideline. Feel free to use fewer or more fibers for each married section. The following number of fibers is from my experience and materials. On a smaller size fly (shorter shank or less than 2/0), go with three fibers each. On a larger size fly (longer shank or large than a 2/0), use four fibers each. On a 5/0 or larger, use five fibers each. The left side of a feather from the left side of the bird goes on the fly's left wing. The right side of a feather from the right side of the bird goes on the fly's right wing. Cut fibers for both sides and marry. Depending on the size of the hook used, the order of wing and throat can vary. When using jay, tie the wing in first, then tie in and wrap the jay. Otherwise the throat can be tied in before the wing. It mostly depends on your preference and the throat feather's stem thickness.



9. Hold the married wings, back to back, in your nondominant hand and hump the front portion of the wing with your other hand. Lay the left wing in the palm of your dominant hand (good side down) and then lay the right wing (good side up) on top of the left wing. Pinch the two wings together just behind where they will be tied in with the thumb and middle finger of your nondominant hand, pick them up (forming an upside down boat or A-frame house shape), and place them on the fly. Position as necessary. Hold tightly with your nondominant hand. Make two soft loops of thread around the wing. Then pull slowly down (completing the second soft loop) or up (starting a third loop around the wing). As the wing fibers begin to compress,

grasp the waste ends at their base with your dominant hand and gently bend them up. This produces a pronounced kink or bend in the wing, helping the thread cinch down. Pull on the bobbin to take up slack thread. Repeat bending the waste ends and pulling up the slack thread until you feel the thread is tight. Relax your nondominant hand and let go. Reposition the wing as you feel necessary, even taking off the thread wraps and remounting the wing. Hold the wing with your nondominant hand and lift the butt ends up with your dominant hand to set the wing even lower. The fibers on the wing and waste side balance on this point like a teeter totter; when one end goes up, the other end of the lever goes down. When satisfied with the wing's position, make two to five tight wraps close together or on top of each other. This is the time to add a drop of cement if you so choose. Let the cement dry for a good fifteen to twenty minutes. No need to rush this critical step. Carefully clip the waste ends. It is best if they are trimmed one fiber at a time. It is tedious, but your wing is less likely to shift otherwise.



10. Select and prepare a blue hackle, saddle, or schlappen of your choice, or, if size allows, a jay wing feather. Tie the throat feather in on the underside of the hook with two or three wraps of thread. Take two to four wraps and tie off on the underside of the hook shank. Trim the waste end. Select two small golden pheasant tippet feathers. The tippets can be tied so the black edge is even with the orange/red silk junction down to the size where both the tippet and jungle cock nail feather are even in length. Crimp the tippet shaft flat before tying in with two to four thread wraps. Prepare the jungle cock eyes. Unwind one or two thread wraps and tie in the jungle cock with one to three thread wraps. Select a topping to match the length and curvature of the one you drew out. Strip the excess fibers, flatten the stem, and tie in with one to three thread wraps. Unwind one or two thread wraps and tie in a macaw tail feather fiber on each side as a horn with one or two thread wraps. Carefully clip the waste ends; it is best if they are trimmed one fiber at a time. It is tedious, but your adornments are less likely to shift otherwise. Make a nice thread head, whip finish, clip, and cement. Done!!



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Appendix 1

Calculating the Length of the Tail and Wing Toppings

Before I begin the exercise and calculations, here are my assumptions: 1) the length of the hook shank between the fore end of the butt and the end of the fly's head is approximately equal to twice the gape of the hook (in general this proportion can be any number, realistically it is between one and four), 2) the butt front end lines up with the point of the hook, and 3) the wrapping of the butt over the tail does not lower the tip of the tail. Working with proportions of 1:1¼, 1:1⅓, and 1:1½, the distance from the tail tie in point to where the end of the tail meets the end of the wing topping are shown below.

Given the distance of the hook gape (in inches or millimeters), the ratio (from this point onward to be called the proportion) of the length of the hook shank (defined as the distance from above the point of the hook to the blind eye) to the distance of the gape of the hook, and the how far back the end of the tail should extend from its tie in point in terms of the hook gape, it can be determined how long the golden pheasant crest feathers need to be for both the tail and wing topping. Using the usual proportion that the tail height is equal to the hook gape and the tail extends back a distance equal to 1½ hook gapes, then we can figure out the crest's length. Let's introduce some variables, letting g = hook gape distance, L_t = length of tail crest, L_w = length of wing crest, p_t = tail proportion, and p_b = hook shank proportion (see figure below). The tail proportion is going to be defined as the ratio of the distance the tail extends horizontally at the rear of the fly from the tie in point to the distance the tail rises vertically above the hook shank. The tail proportion is usually 1½, but can vary as you like. You are most likely to use a proportion ranging from 1 to 2. The hook shank proportion is the ratio of length of the hook shank, from just above the hook point to the blind eye, to the hook gape distance. Using a right triangle with the appropriately labeled sides as a visual aid (see figure below), the Pythagorean Theorem gives

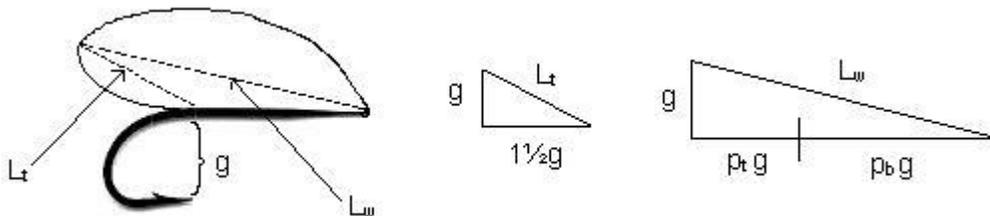
$$c^2 = a^2 + b^2 \rightarrow L_t^2 = a^2 + b^2 \rightarrow L_t^2 = g^2 + (1\frac{1}{2}g)^2 = g^2 + 2\frac{1}{4}g^2 = 3\frac{1}{4}g^2 \rightarrow L_t = \sqrt{3\frac{1}{4}g^2}$$

$$L_t = g\sqrt{13/4} \approx 1.8g. \text{ In general, } L_t^2 = g^2 + (p_t g)^2 = g^2 + g^2 p_t^2 = g^2(1 + p_t^2) \rightarrow L_t = g\sqrt{1+p_t^2}$$

The length of the wing topping can be calculated in a similar manner. Drawing our right triangle, we have the vertical leg equal to the hook gape and the horizontal leg equal to the sum of both the tail proportion times the hook gape distance and the hook shank proportion times the hook gape distance.

$$c^2 = a^2 + b^2 \rightarrow L_w^2 = a^2 + b^2 = g^2 + (p_t g + p_b g)^2 = g^2 + [(p_t + p_b)g]^2 = g^2 + (p_t + p_b)^2 g^2$$

$$L_w^2 = [1 + (p_t + p_b)^2]g^2 \rightarrow L_w = g\sqrt{1 + (p_t + p_b)^2}$$



Both derivations give exact formulas. But they are not useful unless you can take a square root in your head without a table or calculator. So I have come up with an approximation for each which seems to give similar results, erring on the side of too much material. Instead of computing $L_t = g\sqrt{1+p_t^2}$ and $L_w = g\sqrt{1+(p_t+p_b)^2}$, use $L_t \approx 2.25g$. On most style blind eye shanks, use $L_w \approx 3.25g$, and on Spey, Dee, or otherwise long shanked hook use $L_w \approx 5g$.

Calculating the Length of a Needed Rib

How long do the ribs and silk strands need to be? With a little ingenuity we can figure out the length of each material that we need in order to complete the body of this fly. For the floss and other body coverings, first find the surface area of the foundation of the fly's body, which is a cylinder. Since area = length * width, the area of the cylinder is equal to length * circumference = $L * 2\pi r$. Given a material's width (m_w), the length of material needed can be found: $(2\pi rL) / (m_w) = \text{length of piece needed}$. Note, this calculation does not include the amount needed to both tie in and tie off. Add whatever length you feel you will need to tie in the material and how much leftover you will need to tie off. What may be more practical to measure than the radius is the diameter of the fly's body. In that case $2\pi rL$ becomes πDL as $2r = D$. Now we have $(\pi DL) / (m_w) = \text{material's length}$. If two layers are needed, make the first calculation as above. This is what will be needed for the first layer. To determine how much is needed for the second layer, make the same calculation as above but with a new diameter, as new diameter = old diameter + 2(material's thickness). If the old diameter is D_1 , the new diameter is D_2 , the material's thickness is m_t , then we can determine the amount needed for two passes over the body with the body material in a one step calculation.

$$\text{material length} = (\pi LD_1) / m_w + (\pi LD_2) / m_w ; \text{ using } D_2 = D_1 + 2m_t, \text{ then}$$

$$\text{material length} = (\pi LD_1) / m_w + \pi L(D_1 + 2m_t) / m_w = (\pi LD_1 + \pi L(D_1 + 2m_t)) / m_w$$

$$\text{material length} = (\pi LD_1 + \pi LD_1 + 2\pi Lm_t) / m_w = (2\pi LD_1 + 2\pi Lm_t) / m_w = 2\pi L(D_1 + m_t) / m_w$$

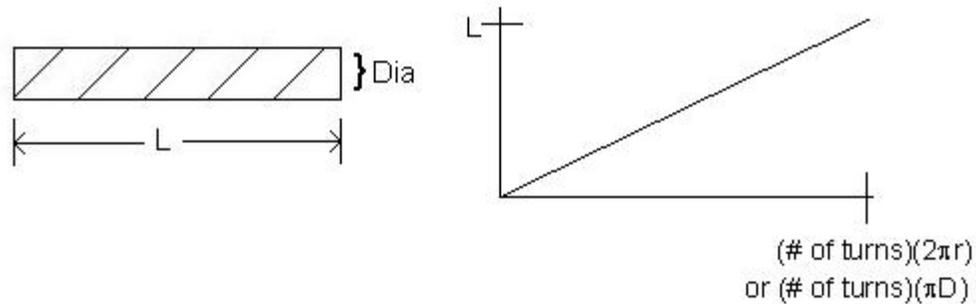
We can rewrite D_1 now as just D , the diameter of the fly before applying the body material.

$$\text{material length} = 2\pi L(D + m_t) / m_w$$



Now to figure out how long our ribs need to be. First we need to know how many turns are going to be taken and the length of the fly's body. Both should be known (an approximate distance for the length of the body should be used) before tying in the ribs. The ribs will travel a horizontal distance equal to the length of the fly's body and a vertical distance equal to the number of turns times the circumference of the fly's body. Given the number of turns taken along the body (n) and the length of the body (L), the length of the needed rib can be calculated. We can depict these relationships in a graph (see figure below). As the length of the line is equal to the distance of the actual needed rib, we can use the Pythagorean

Theorem. Note, this calculation does not include the amount needed to both tie in and tie off. Add whatever length you feel you will need to tie in the material and how much leftover you will need to tie off after doing the calculation.



$$c^2 = a^2 + b^2 = L^2 + (n2\pi r)^2 \text{ or } c^2 = L^2 + (nD\pi)^2, \text{ where } n = \# \text{ of turns}$$

$$c = \sqrt{L^2 + (n2\pi r)^2} = \sqrt{L^2 + 4n^2\pi^2 r^2} \text{ or } c = \sqrt{L^2 + (nD\pi)^2} = \sqrt{L^2 + n^2 D^2 \pi^2}$$

We could also use a process from calculus to find the answer. In order to use this method we need to determine both the formula of our function (in our example a straight line) and over what distance to integrate. The general formula from calculus that gives the actual distance of a curve is: $L = \int_a^b [1 + [f'(x)]^2]^{1/2} dx$. The limits of integration (a and b) we obtain from our graph. We are integrating from the tie in point of the ribs to the tie off point of the ribs. The left end (a) is 0 and the right end (b) is $n\pi D$. From our figure our function is a straight line. As straight lines have a general formula of $y = mx + b$, we need to find the slope and y-intercept. To find the slope we need two points along the line. For the first point, we can use (0,0). For the second point we need to look at the graph. We know that at a x-value of $n2\pi r$ the line rises a distance of L. So that is our second point, $(n2\pi r, L)$. As $m = (y_2 - y_1) / (x_2 - x_1)$, then the slope for our line is $m = (L - 0) / (n2\pi r - 0) = L / n2\pi r$. Since it is easier to measure the fly body's diameter than its radius, we can substitute $D\pi = 2\pi r$. Now $m = L / nD\pi$. I will give the answer expressed for both the radius, r, and diameter, D. As our line intercepts the y-axis at 0, $b = 0$. The formula of the line is now $y = [L/(n2\pi r)]x$. To avoid the possibility of confusing the length of the body, L, with the distance of a curve, L_r will be the value of the length of the curve, and; therefore, the length of the rib. The variable L will continue to represent only one quality in flux, the length of the fly's body. Let's now compute the length of the rib.

$L_r = \int_a^b [1 + [f'(x)]^2]^{1/2} dx$. The function $f'(x)$ is the derivative of $f(x)$, or the instantaneous rate of change of $f(x)$ at x. So $f'(x) = dy/dx = d(mx+b)/dx = d[L/(n2\pi r)x]/dx = L/(n2\pi r)$.

$$\begin{aligned} L_r &= \int_a^b [1 + [f'(x)]^2]^{1/2} dx = \int_a^b [1 + [L/(n2\pi r)]^2]^{1/2} dx = \int_a^b [1 + L^2/(n2\pi r)^2]^{1/2} dx = \\ &= \int_0^{n2\pi r} [1 + L^2/(n2\pi r)^2]^{1/2} dx = [1 + L^2/(n2\pi r)^2]^{1/2} \int_0^{n2\pi r} dx = [1 + L^2/(n2\pi r)^2]^{1/2} x \Big|_0^{n2\pi r} = \\ &= [1 + L^2/(n2\pi r)^2]^{1/2} (n2\pi r). \text{ This formula can be further simplified.} \end{aligned}$$

$$\begin{aligned} [1 + L^2/(n2\pi r)^2]^{1/2} (n2\pi r) &= [1 + L^2/(4n^2\pi^2 r^2)]^{1/2} (n2\pi r) = [(4n^2\pi^2 r^2 + L^2)/(4n^2\pi^2 r^2)]^{1/2} (n2\pi r) = \\ &= [(4n^2\pi^2 r^2 + L^2)^{1/2} / (n2\pi r)] (n2\pi r) = (4n^2\pi^2 r^2 + L^2)^{1/2} \text{ or using } 2r = D, \text{ then...} \end{aligned}$$

$$L_r = \int_a^b [1 + [f'(x)]^2]^{1/2} dx = \int_a^b [1 + [L/(nD\pi)]^2]^{1/2} dx = \int_a^b [1 + [L^2/(nD\pi)^2]]^{1/2} dx =$$

$$\int_0^{nD\pi} [1 + [L^2/(nD\pi)^2]]^{1/2} dx = [1 + [L^2/(nD\pi)^2]]^{1/2} \int_0^{nD\pi} dx = [1 + [L^2/(nD\pi)^2]]^{1/2} x \Big|_0^{nD\pi} =$$

$$[1 + [L^2/(nD\pi)^2]]^{1/2} (nD\pi). \text{ This formula can be further simplified.}$$

$$[1 + [L^2/(nD\pi)^2]]^{1/2} (nD\pi) = [1 + [L^2/(n^2D^2\pi^2)]]^{1/2} (nD\pi) = [(n^2D^2\pi^2 + L^2)/ n^2D^2\pi^2]^{1/2} (nD\pi) =$$

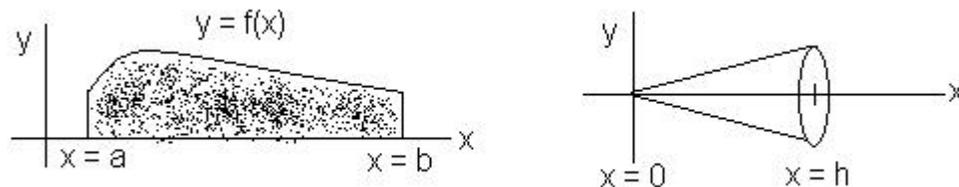
$$L_r = [(n^2D^2\pi^2 + L^2)^{1/2}/(nD\pi)](nD\pi) = (n^2D^2\pi^2 + L^2)^{1/2}.$$

After simplifying these two versions of the formula, we find we obtain the same answer as we did earlier, using a simpler calculation. Again, this calculation does not include material length needed to tie in and tie off. This will work for both metric and English. Just be consistent in the units in which you measure.

Calculating the Surface area of a Cup Shaped Cone Fly Body

Earlier, we calculated the length of silk strands needed to complete the body. Since the body was cylindrical, we could easily find the area of the body and then find the length of floss needed. However, if you taper your body before applying the silk, the underbody is no longer shaped like a cylinder; it is now cone shaped. The formula for a right circular cone's surface area with height h and base radius r can be found using a little calculus.

The general formula is $S = \int_a^b 2\pi f(x) \sqrt{1 + [f'(x)]^2} dx$, where S is the surface area, a and b are the limits of integration, $f(x)$ is the function revolved around the x -axis to generate the volume or solid, and $f'(x)$ is the derivative of $f(x)$. We will find the area by summing up the surface area of infinitely thin slices of the solid. Below is a figure of a general solid and our cone.



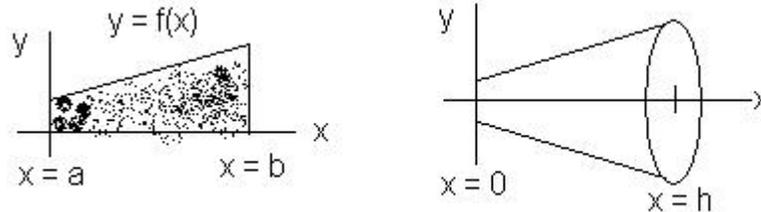
Before we begin, we need to find $f(x)$. But what is $f(x)$ in this instance? Let's look at our figure. The edge of the cone is bounded by a straight line, which is $y = mx + b = f(x)$. We need to find the slope and y -intercept. In our case the y -intercept is zero. Again we need two points to calculate slope. We can use the points $(0,0)$ and (r,h) as the cone has a radius r at a distance h away from its top. So $m = (y_2 - y_1) / (x_2 - x_1) = (r - 0) / (h - 0) = r/h$. As $m = r/h$, $f(x) = rx/h$. The first derivative of $f(x)$, $f'(x)$, is equal to r/h . Now we can find the area of our cone.

$$S = \int_a^b 2\pi f(x) \sqrt{1 + [f'(x)]^2} dx = \int_0^h 2\pi (rx/h) \sqrt{1 + [r/h]^2} dx = 2\pi (r/h) \sqrt{1 + [r/h]^2} \int_0^h x dx$$

$$S = 2\pi (r/h) \sqrt{1 + [r/h]^2} \frac{1}{2} x^2 \Big|_0^h = 2\pi (r/h) \sqrt{1 + [r/h]^2} \frac{1}{2} h^2 = \pi r h \sqrt{1 + [r/h]^2}$$

However, being as picky as I am, I want to point out that our fly's body does not start at the rear with a diameter of 0. It has some diameter and; therefore, the above calculation is not precisely correct. It will give only an approximation. So let's calculate the volume of a right circular cone with height h , lower base radius r , and top radius R using the above method.

Before we begin, we need to find $f(x)$. But what is $f(x)$ in this instance? Let's look at our figure. The edge of the cone is bounded by a straight line, which is $y = mx + b = f(x)$. We need to find the slope and y-intercept. From the graph we can tell in our case the y-intercept is equal to r . Again we need two points to calculate slope. We can use the points $(0,r)$ and (R,h) . So $m = (y_2 - y_1) / (x_2 - x_1) = (R - r) / (h - 0) = (R - r) / h$. As $m = (R - r) / h$ and $b = r$, $y = f(x) = (R - r)x / h + r$. So $f'(x) = (R - r) / h$. Now we can find the area of our cone.



$$S = \int_a^b 2\pi f(x) [\sqrt{1 + [f'(x)]^2}] dx = \int_0^h 2\pi [(R - r)x / h + r] [\sqrt{1 + [(R - r) / h]^2}] dx$$

$$S = 2\pi \sqrt{1 + [(R - r) / h]^2} \int_0^h [(R - r)x / h + r] dx = 2\pi \sqrt{1 + [(R - r) / h]^2} [(R - r) / h] \frac{1}{2} x^2 \Big|_0^h + rx \Big|_0^h =$$

$$S = 2\pi \sqrt{1 + [(R - r) / h]^2} [(R - r) / h] \frac{1}{2} h^2 + rh = 2\pi h \sqrt{1 + [(R - r) / h]^2} [\frac{1}{2}(R - r) + r]$$

Calculating the Length of Hackle Barbs and Feather Taper

As discussed in the section on laying out the fly, there exists a nice proportion between the length of the fly's body and the length of the hackle barbs. Given a few parameters, we can figure this out along with the proper taper a hackle feather should have in order to produce the desired barb lengths. The unknowns we easily determine are body length and diameter of the body. Using the Pythagorean Theorem, we find the hackle barb length (see the last figure in the layout section).

$$c^2 = a^2 + b^2 = a^2 + a^2 = 2a^2 \rightarrow c = a\sqrt{2} \quad ; \quad c = p_b g$$

Knowing that c is the body length and that the body length is equal to $p_b g$, our solution then becomes $a\sqrt{2} = p_b g \rightarrow a = \frac{1}{2} p_b g \sqrt{2}$. This is the length the barbs of the final turn of hackle should have.

Now to calculate the taper of the desired hackle feather. This is the taper of the feather's barb length, not actual width of the feather. At certain points along the feather's stem the barbs need to be a certain length. We know at the final point the barbs need to be equal in length to $\frac{1}{2} p_b g \sqrt{2}$. How can we figure it out? The body has already been divided into five sections so we know where our ribs will lie. Behind the ribs lies the hackle. So the hackle barbs point down at each one-fifth body section. These will be our five points: $1/5$, $2/5$, $3/5$, $4/5$, and $5/5$. Knowing this we can determine the barb lengths at each point. Either measure the body, in millimeters, or use body length = $p_b g$.

Since the hackle stem is tied in at the $1/5$ body length point, it has a stem length of 0 at this point. In order to reach the $2/5$ body length point, the hackle stem travels a horizontal distance of $1/5$ body length and a vertical distance of $2\pi r$ or $D\pi$. But this is not the true distance the stem travels. We use the Pythagorean Theorem to determine this, in the same way we determined the length of the rib needed.

$$c^2 = a^2 + b^2 = (p_b g/5)^2 + (2\pi r)^2 \rightarrow c = \sqrt{[(p_b g/5)^2 + (2\pi r)^2]} \text{ or } \sqrt{[(p_b g/5)^2 + (D\pi)^2]}$$

The second turn of hackle travels a total horizontal length of 2/5 body length and a total vertical distance of twice the circumference of the body, $2\pi r(2)$ or $2D\pi$.

$$c^2 = a^2 + b^2 = (2p_b g/5)^2 + (4\pi r)^2 \rightarrow c = \sqrt{[(2p_b g/5)^2 + (4\pi r)^2]} \text{ or } \sqrt{[(2p_b g/5)^2 + (2D\pi)^2]}$$

The third turn travels a total horizontal length of 3/5 body length and a total vertical distance of three times the circumference of the body, $2\pi r(3)$ or $3D\pi$. The fourth turn travels a total horizontal length of 4/5 body length and a total vertical distance of three times the circumference of the body, $2\pi r(4)$ or $4D\pi$. Let us make a list of barb lengths vs. hackle stem length.

Body Length	Barb Length	Hackle Stem Length
$p_b g/5$	$(\frac{1}{2}p_b g\sqrt{2})/5$	0
$2p_b g/5$	$2(\frac{1}{2}p_b g\sqrt{2})/5$	$\sqrt{[(p_b g/5)^2 + (2\pi r)^2]} \text{ or } \sqrt{[(p_b g/5)^2 + (D\pi)^2]}$
$3p_b g/5$	$3(\frac{1}{2}p_b g\sqrt{2})/5$	$\sqrt{[(2p_b g/5)^2 + (4\pi r)^2]} \text{ or } \sqrt{[(2p_b g/5)^2 + (2D\pi)^2]}$
$4p_b g/5$	$4(\frac{1}{2}p_b g\sqrt{2})/5$	$\sqrt{[(3p_b g/5)^2 + (6\pi r)^2]} \text{ or } \sqrt{[(3p_b g/5)^2 + (3D\pi)^2]}$
$p_b g$	$\frac{1}{2}p_b g\sqrt{2}$	$\sqrt{[(4p_b g/5)^2 + (8\pi r)^2]} \text{ or } \sqrt{[(4p_b g/5)^2 + (4D\pi)^2]}$

Determining the Placement of the Body Hackle, Pattern Dependent Hackling Option

Going with the second option in respect to where the hackle is to be tied in, we need to determine where the ribs will be located (see tying procedure discussion in Tying Considerations). Since the ribs will make five complete turns around the fly's body, and we know the divisions or proportion of body sections, this is simply done.

360° per revolution, 5 total revolutions, body proportions = 3:1 ($\frac{1}{4}$, $\frac{3}{4}$) or 2:1 ($\frac{1}{3}$, $\frac{2}{3}$)

Now just multiply $5(360^\circ) = 1800^\circ$ by the body division ($\frac{1}{4}$, $\frac{1}{3}$, $\frac{1}{2}$, $\frac{2}{3}$, $\frac{3}{4}$, etc.).

$$1800^\circ(\frac{1}{4}) = 450^\circ, \quad 1800^\circ(\frac{1}{3}) = 600^\circ$$

Since the ribs start at the bottom of the hook shank, we will call the starting point 0°. So if you are using the 3:1 body proportion, the ribs make one complete turn (360°) and an additional one-quarter turn before reaching the color division. If you are a right handed tyer and wind the ribs towards you, up, and then over and down the hook (clockwise if viewing the hook head on, looking from the eye down the shank towards the tail), the hackle will need to be tied in on the middle of the right side. If you are a right handed tyer and wind the ribs counterclockwise, the hackle will need to be tied in on the middle of the left side. If you are a left handed tyer and wind the ribs counterclockwise, the hackle will need to be tied in on the middle of the left side. If you are a left handed tyer and wind the ribs clockwise, the hackle will need to be tied in on the middle of the right side.

Calculations for This Pattern on This Hook (r = 1 mm or D = 2 mm)

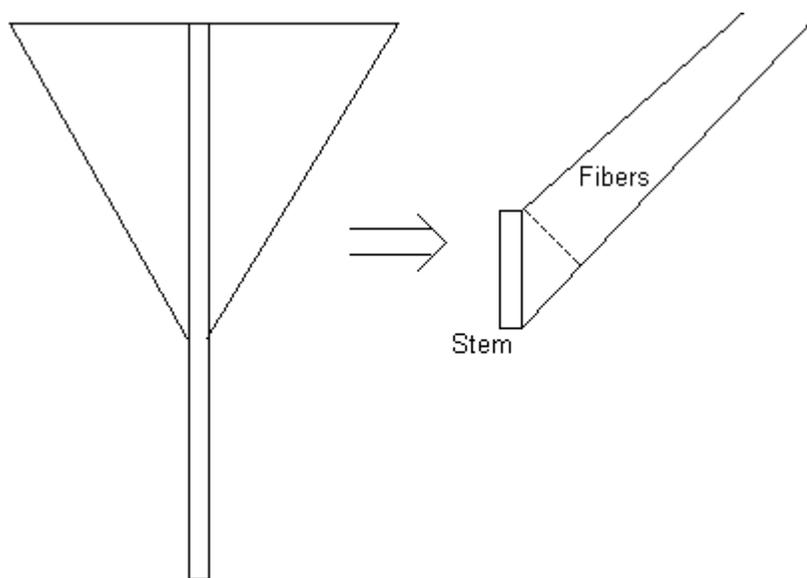
$p_t = 1\frac{1}{2}$,	$p_b = 2.375$	Gape: 5/8"	Hook Point to Eye Point: 1½"
$L_t = 1\frac{3}{16}$ "	$L_w = 2\frac{1}{2}$ "	Silk tag length, total = 4"	
Ribs' length, total = 5½"		Silk length total, rear body = 4½"	
Silk length total, front body = 10"		Hackle tie in at body junction = 450°	

<u>Body Length (mm)</u>	<u>Barb Length (mm)</u>	<u>Hackle Stem Length (mm)</u>
8	5	0
15	11	12
23	16	25
30	21	37
38	27	49

Winging Materials: When the Left Goes on the Right and Guessing Fiber Yields

While selecting the main wing material components, cutting the individual quill slips, and marrying the fibers, I started to ponder a couple of questions. First of all, if I need a x" wide quill strip of material for a wing, how much or how long of a section of the stem can I cut off and be sure to have the needed number of fibers? Then followed, if I have a stem x" long, how many usable fibers are there? A third question arose: If I just clip an x" wide quill strip, how many fibers are present in this strip? With answers to these three questions I can easily figure out how much of each material I will need if I want to build many wings composed of say several different colors of dyed turkey, golden pheasant, bustard, and peacock secondary. Put another way, once I have answers to my three questions I can figure out how many fibers are present in a specific feather and furthermore how many wings it will last. Looking at it in the reverse, if I need to build a number of wings, I will know how much of each material to buy to complete the job. So I pulled out several of each feathers from my stash. I measured the length of stem with usable fibers at least 1" long. Within this distance I counted all the usable fibers. Note that as you move from the middle of feather towards the feather's tip, the density of fibers usually decreases while the density of fibers increases as you move towards the feather's butt. Below is what I found.

I did not actually measure out a specific width of quill strip then count all the fibers in the strip. I left that up to you. However, I do have a quick method to estimate that value. Pick up a feather and take a look at how the fibers come off of the stem. Most fibers come off at about a 45° angle to the stem.



Let's start labeling some portions of a clipped section of stem with its fibers still attached. I have said that fibers usually come off at about a 45° angle to the stem. Given the length of the stem, we can figure out the width of the quill strip. This triangle should look familiar as it is a right isosceles triangle. Label the side comprised by the stem as the hypotenuse, c. The two other side of the triangle, a and b, are equal in length. So if we know c, we can now solve for a or b.

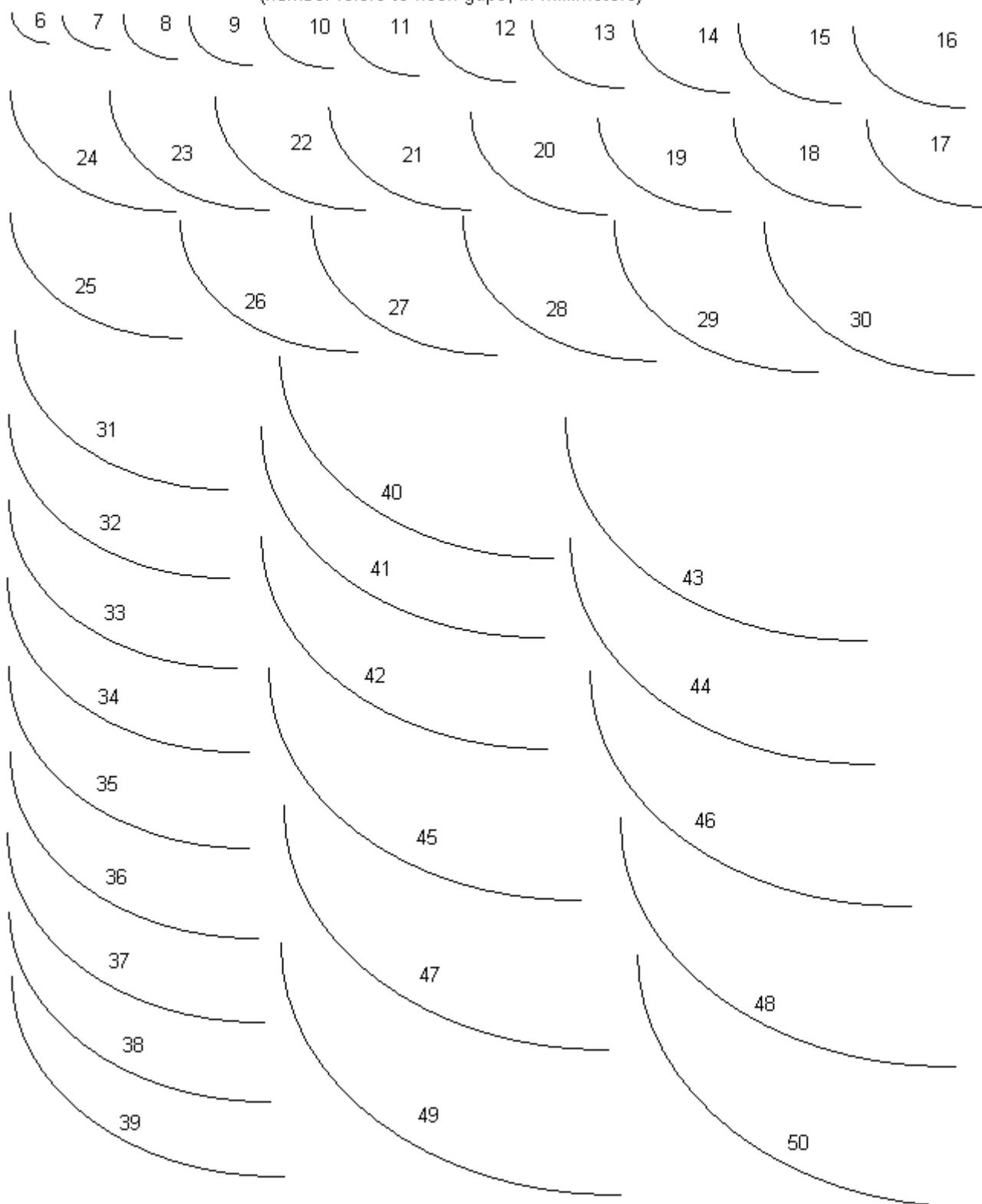
$$c^2 = a^2 + b^2 = a^2 + a^2 = 2a^2 \rightarrow c = a\sqrt{2} \rightarrow a = c/\sqrt{2} = \sqrt{2}(c / 2) . a \approx 0.707c \approx .7c$$

So now you can quickly estimate the thickness of available quill strips in a given length of stem.

<u>Material</u>	<u>Fibers per Inch of Stem</u>	<u>Fibers per Inch of Quill Strip</u>
Goose shoulder	37.7	
Swan		
Turkey tail	33.8	
Peacock secondary	36.0	
Golden pheasant center tail	24.8	
Lady Amherst center tail	31.4	
Great Argus secondary	30.0	
Great Argus tail	29.6	
Florican Bustard	33.5	
Kori Bustard	31.7	

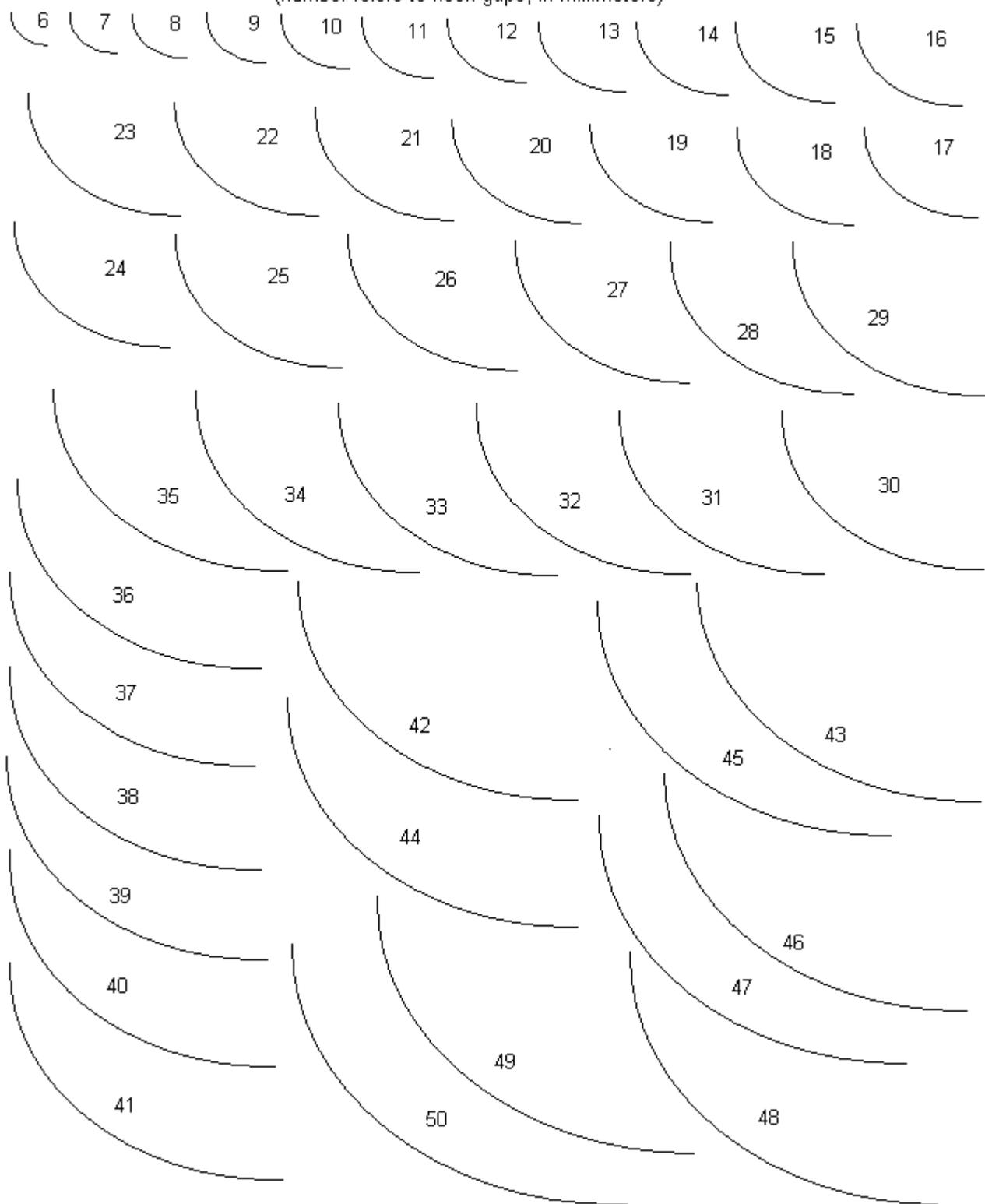
Classic Atlantics Salmon Fly Tail Proportions**1 : 1⅓**

(number refers to hook gape, in millimeters)



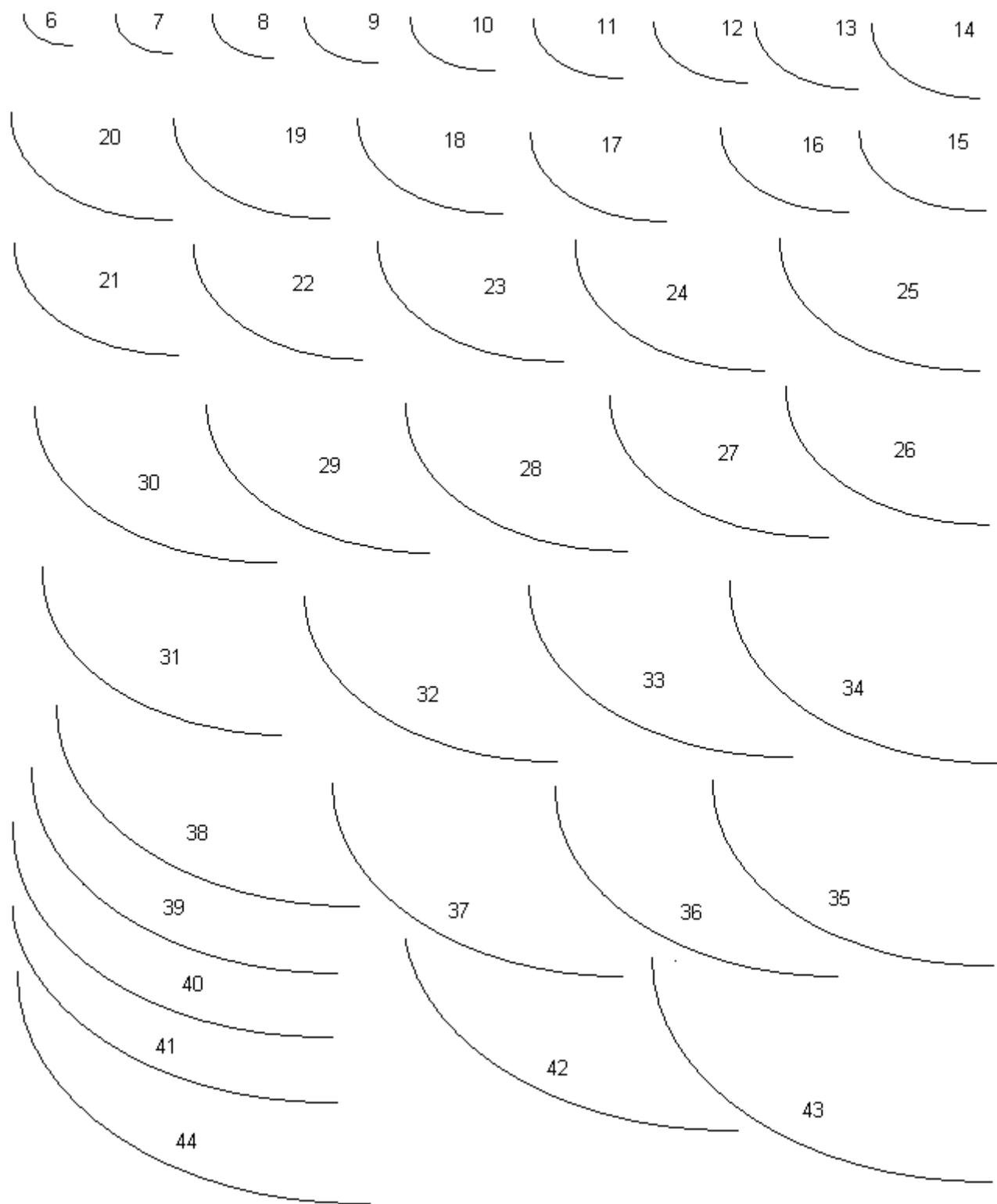
Classic Atlantics Salmon Fly Tail Proportions**1 : 1¼**

(number refers to hook gape, in millimeters)



Classic Atlantics Salmon Fly Tail Proportions

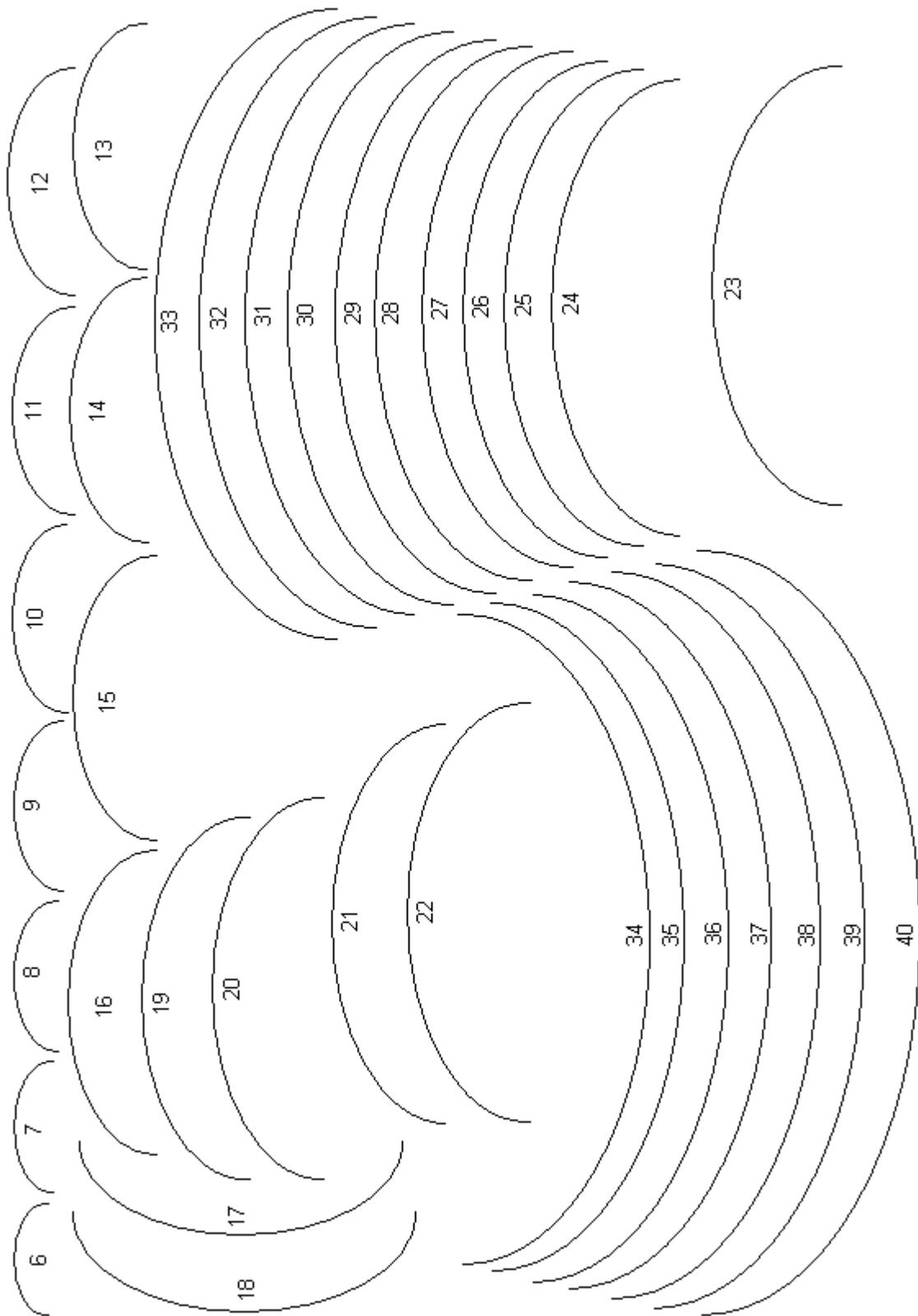
(number refers to hook gape, in millimeters)

1 : 1½

1 : 3½

Classic Atlantic Salmon Fly Topping Proportions

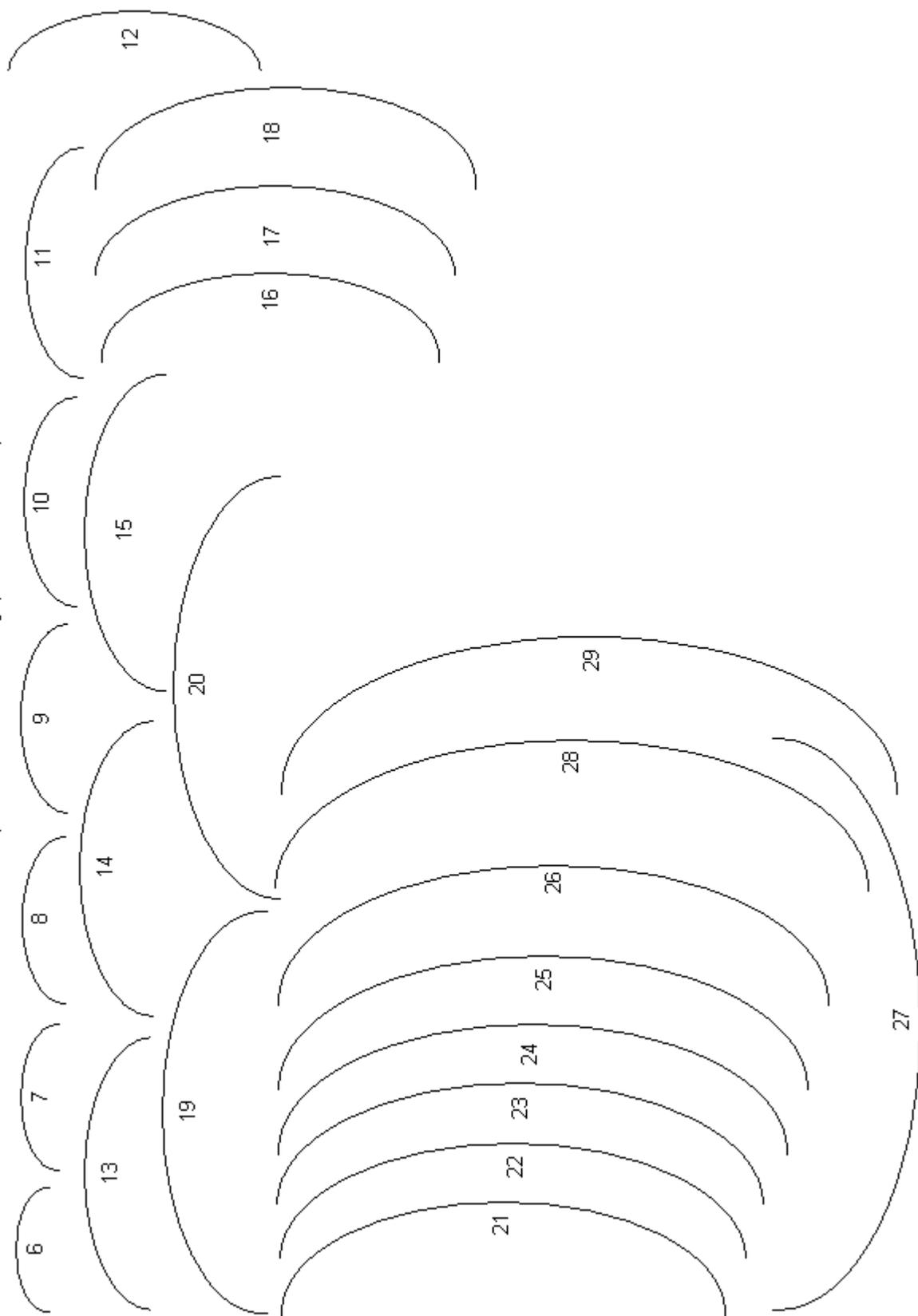
(number refers to hook gape, in millimeters)



Classic Atlantic Salmon Fly Topping Proportions

(number refers to hook gape, in millimeters)

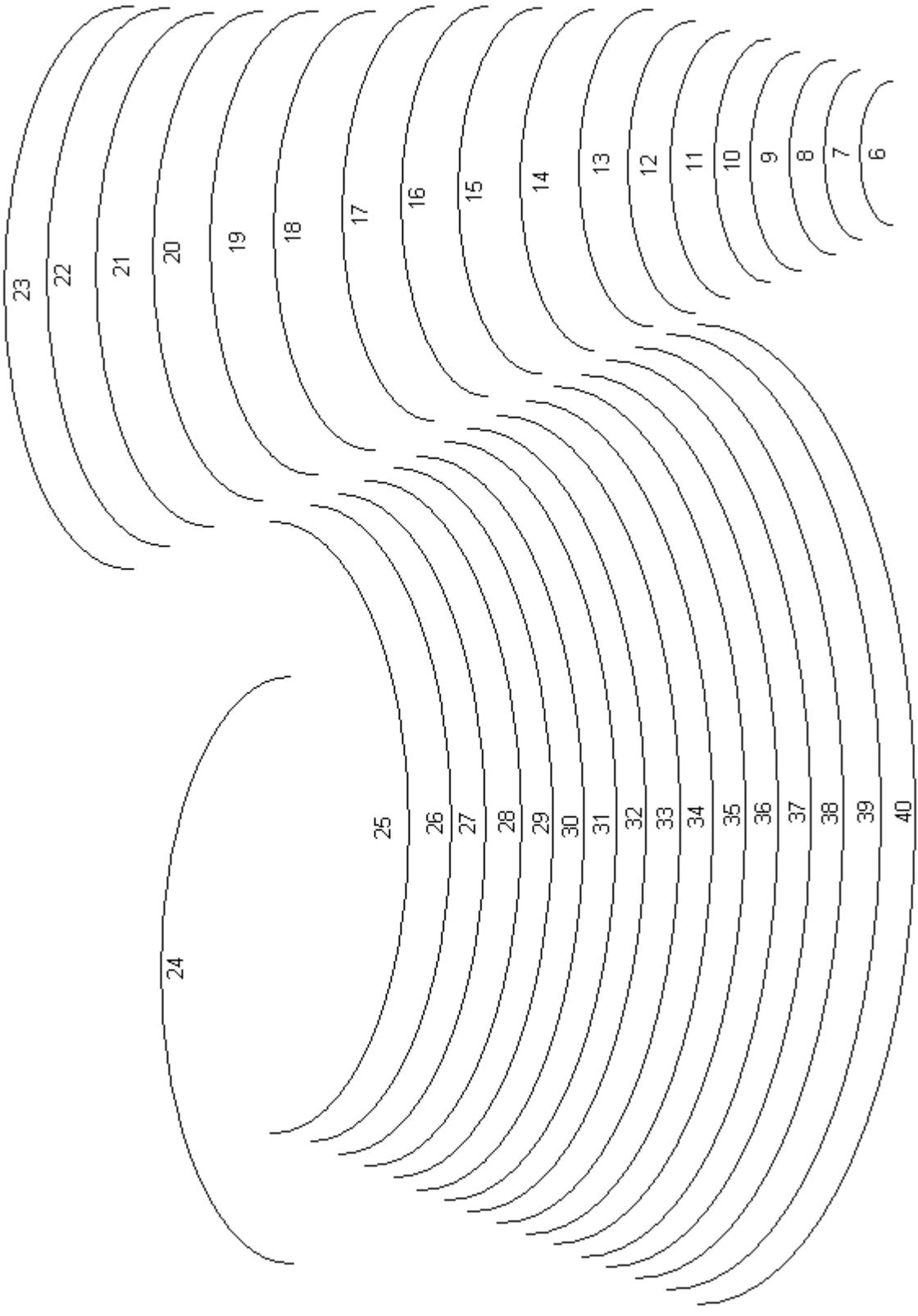
1 : 4

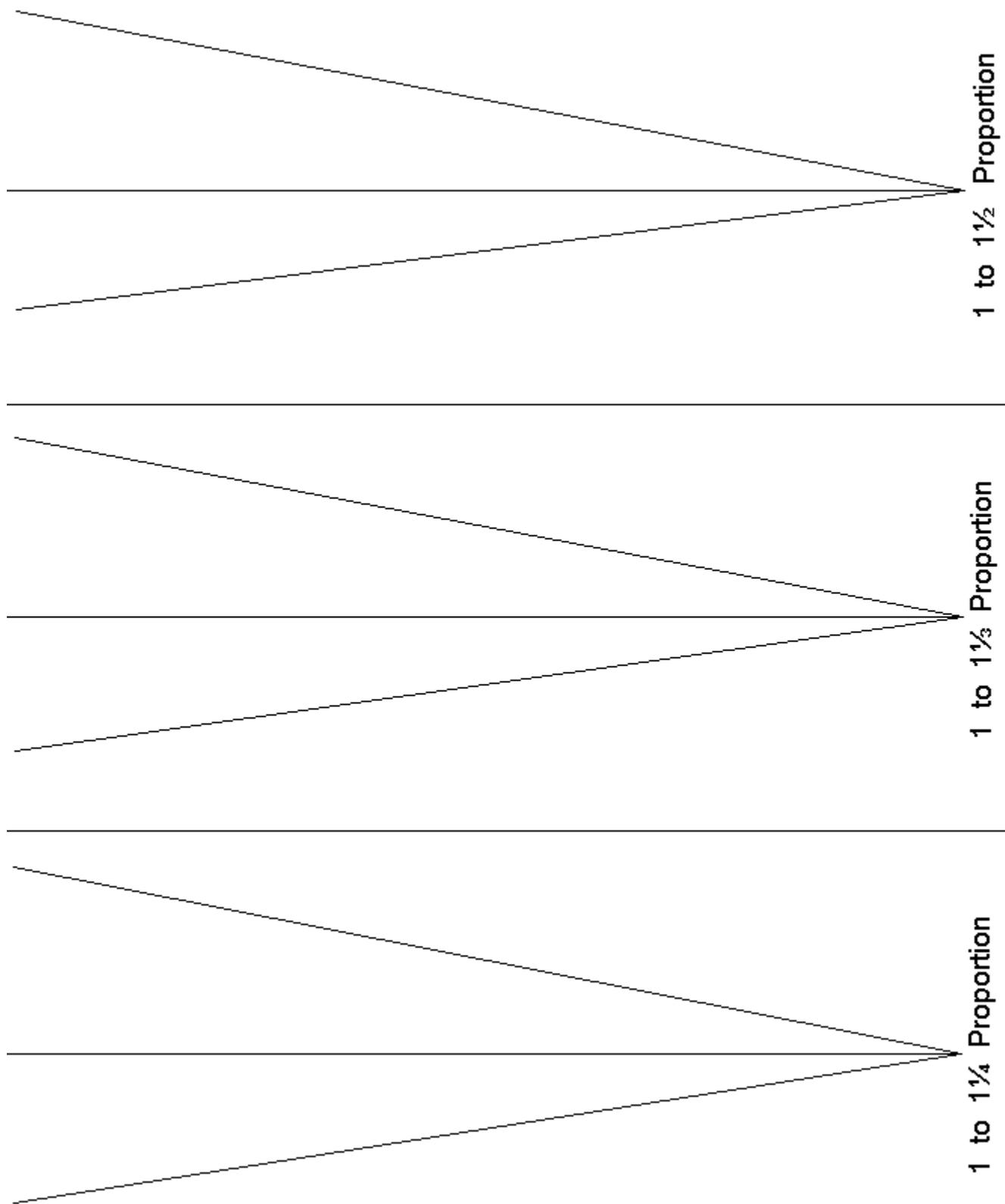


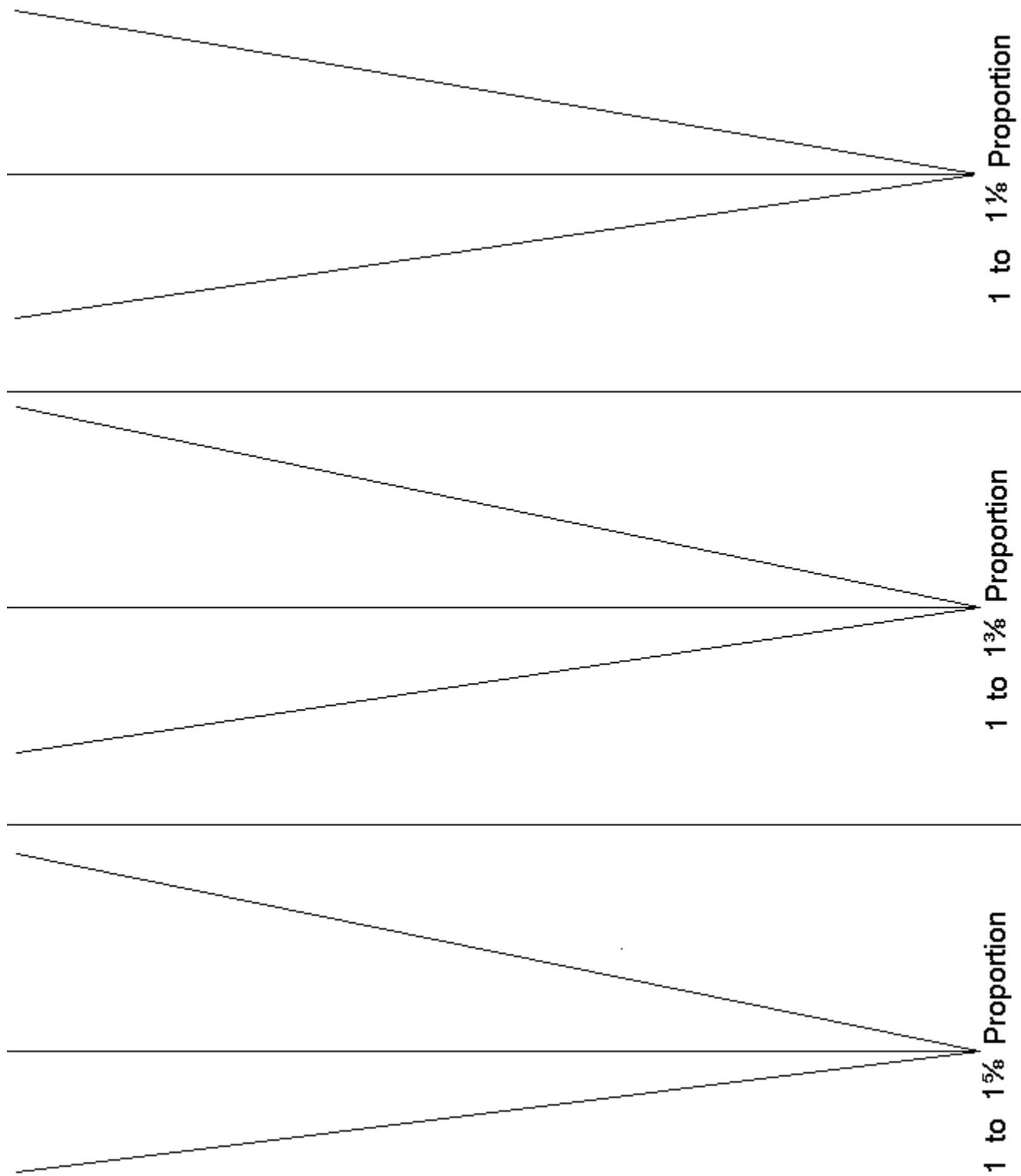
Classic Atlantic Salmon Fly Topping Proportions

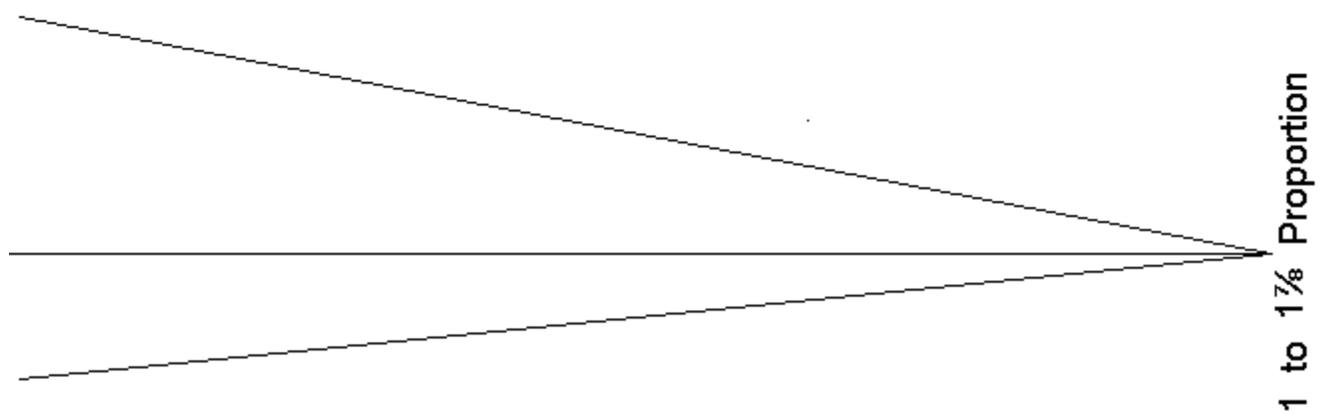
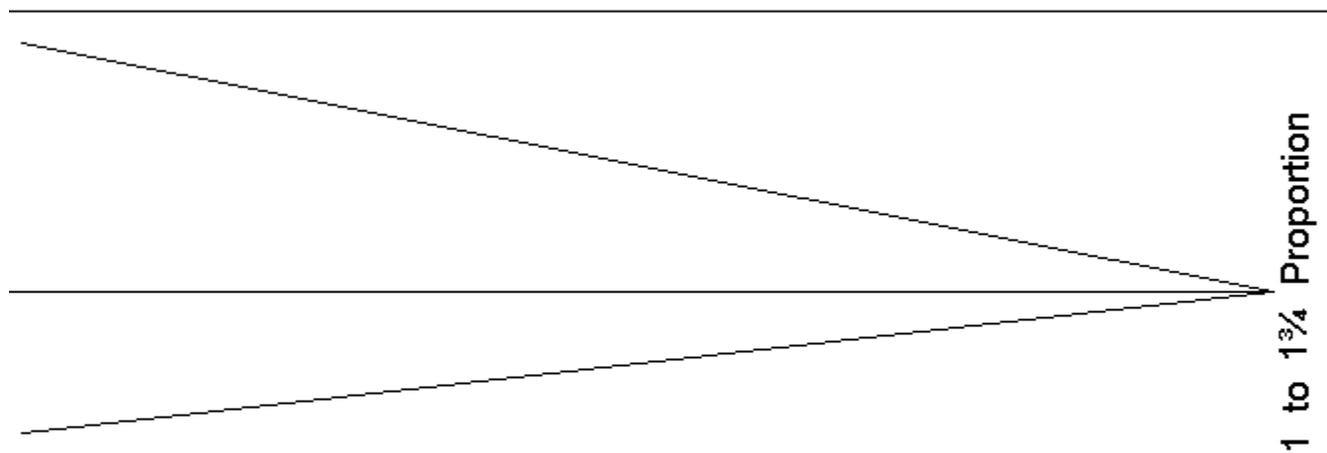
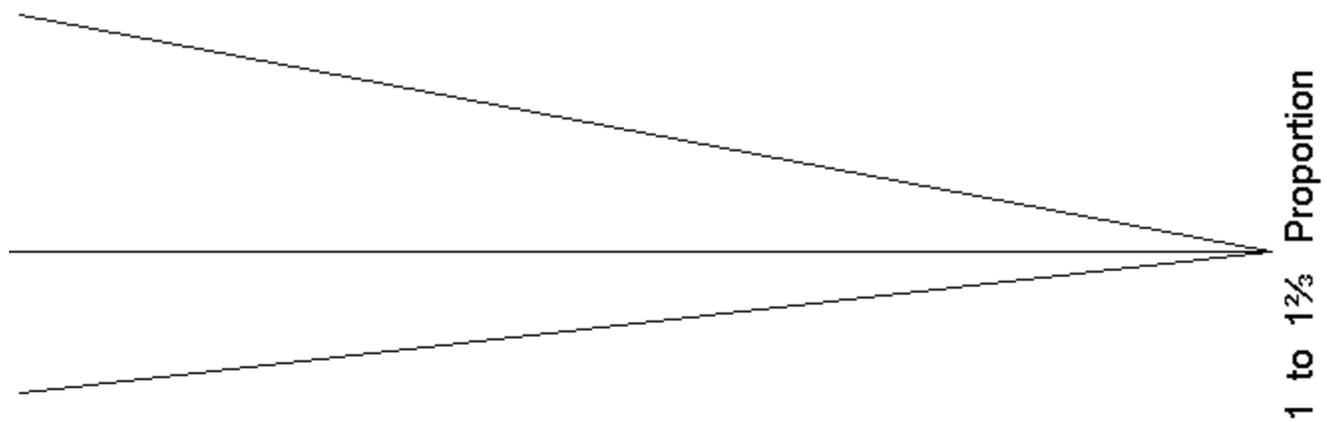
1 : 4½

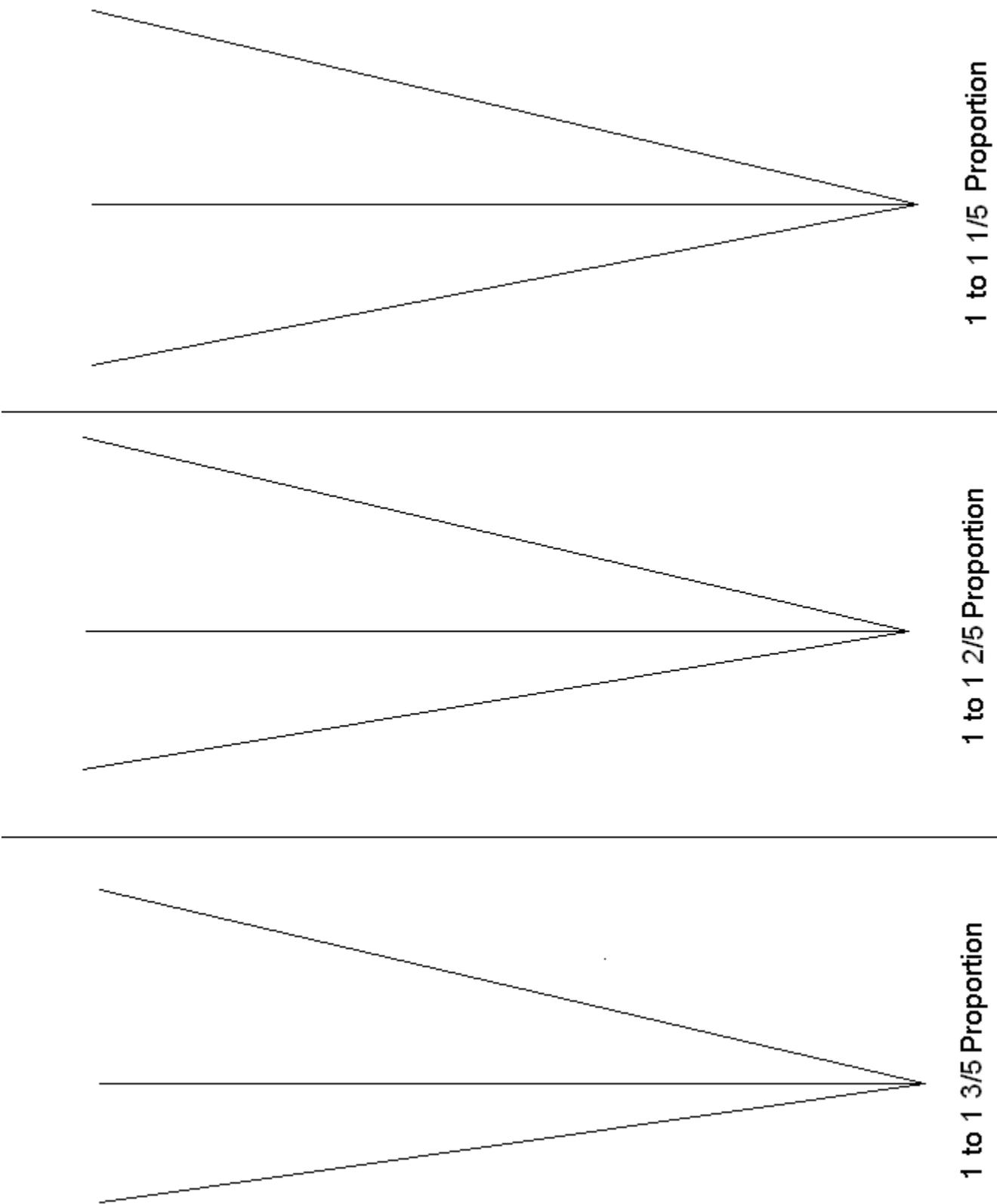
(number refers to hook gape, in millimeters)

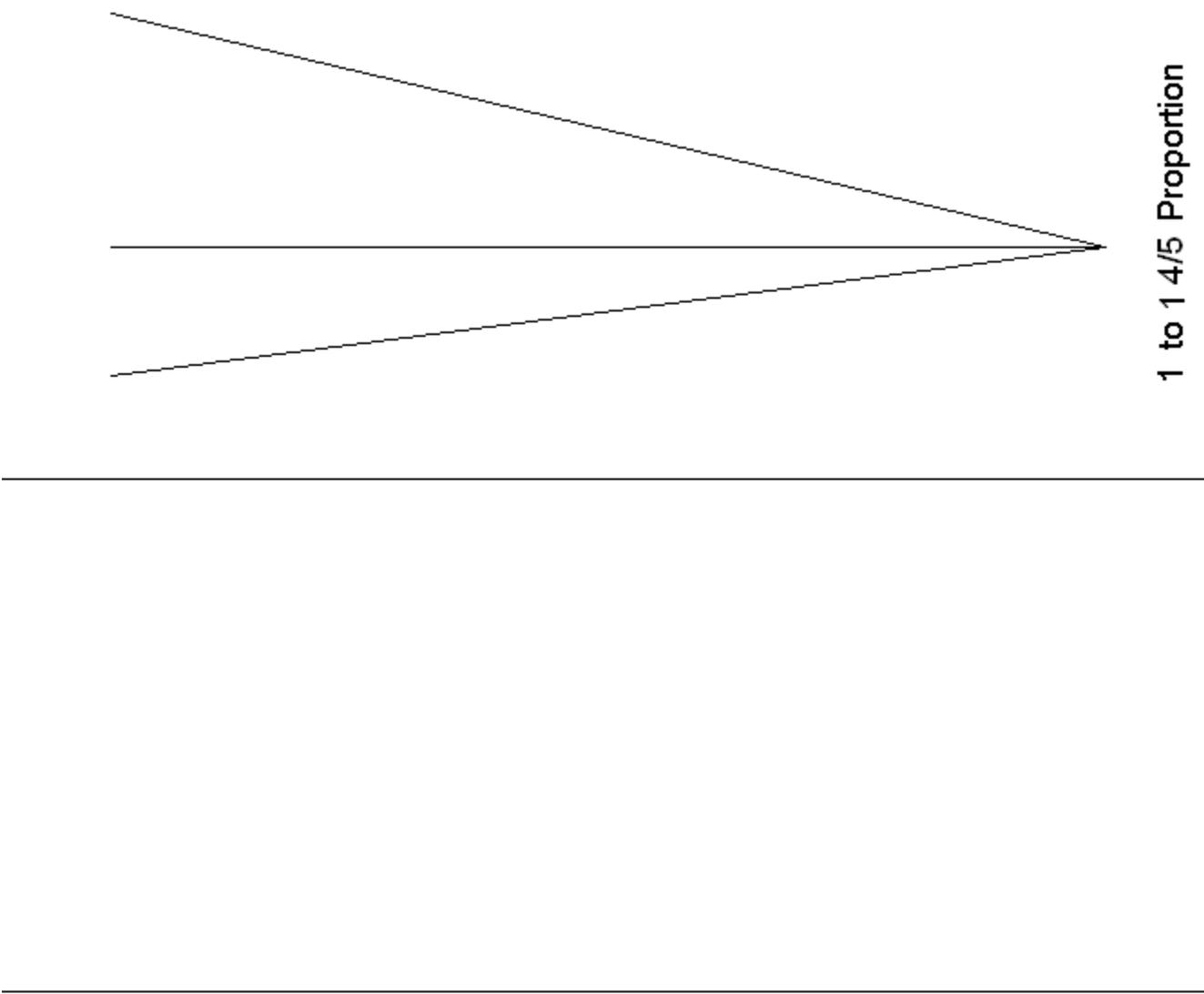












Author's Note

First, let me give you some background into why I put this all together. In early 2004, I began attending monthly Atlantic salmon tying sessions with a group of gentlemen from Salem, Oregon. Each month we would spend a Saturday tying one classic pattern. My suggestion of tying the Gordon at one of our gatherings was accepted. At each meeting, some history or background information was provided about each specific tie along with variations or comments from previous authors. The ringleader for the day would often give his suggestions on how or when to tie in certain materials and show how slight changes in tying materials could change the look of the finished fly.

With all of this in mind, I decided to put together a little "handout" about tying the Gordon. I reference all the books I had on Atlantic salmon flies. I took photos at each step when I tied the four variations I found. You will find all of that herein.

As I tied the variations, I noted that the differences in materials between two patterns would sometimes require a different order in the tying instructions. And some of these could have a significant impact on the fly's appearance. I spent much time looking at how the materials and the order of the materials would effect the fly's looks. This I put together as a section called "Tying Considerations".

I had also been toying around with the idea of laying out the fly before actually tying it. We know that the topping(s) for the wing is dependent on the topping(s) we choose for the tail. So I spent some time determining what the shape of the fly's wing and tail would look like depending on the length of a hook's shank and the width of its gape. Furthermore, I figured I might as well lay out the body divisions and plan where I want the body ribs to lie. Michael Radencich devised and showed how to use a body division tool in his video on tying the Jock Scott, therefore I have not included my own proportion tools here. Mine is not really any different than Michael's. I just printed them on transparency film to help when I am drawing my fly out. The tools are quite simple to make; all you need is paper, a pen or pencil, and a ruler. My plan is ultimately described in the section "Drawing and Laying Out the Fly". In addition, I have included some other proportion tools that may be helpful in your tying.

Browsing through the appendices, you will note that they are quite heavy in the math department! The impetus behind my drive and calculations is I dislike cutting off a piece of silk and while winding it finding that the piece is too short. I have included some formulas to help determine how long a piece of body and/or rib material you may need. The waste should be minimal. Yes, I have tried out these formulas, and they do work. At the very end of the appendices, I have a table concerning the number of fibers per inch of quill of several wing materials. I have included this to aid in building wings. Different materials have different quill fiber thicknesses; therefore, three fibers of dyed turkey most likely are not going to be equal in thickness to three fibers of goose shoulder. Also, the table may be helpful in determining how many fibers are present in a quill you may be considering buying. I have done the work so you would not as much.

I have submitted this to John McLain to put up on his site for free download for a reason and not publish and sell this myself. I feel there is worthwhile information present in this handbook for any tyer. Many tyers have spent their own free time educating me in fly tying and this is my effort at returning a favor. Please enjoy!

I welcome any comments and ideas you may have concerning this handbook. My electronic mail address is: derbyshc@hotmail.com. I will get back to you same day.