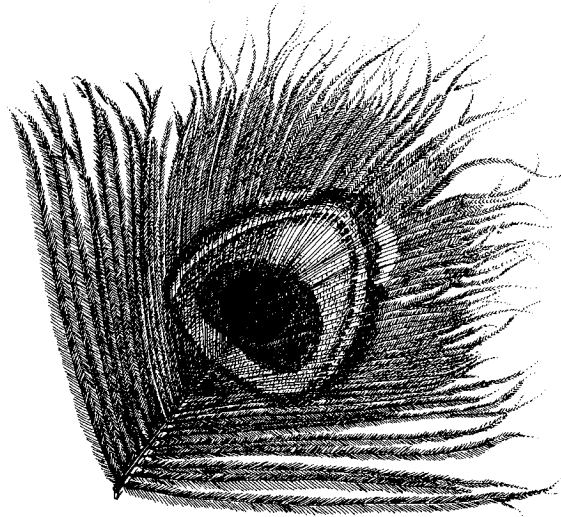


DESIGNING TROUT FLIES

- FEATHER GUIDE -



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Illustrations and layout by Jason Borger

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NOTE: Tyers should make themselves aware of any laws pertaining to the acquisition of any bird feathers listed in the *Guide*. Some feathers listed in the *Guide* may not be commercially available.

Although feathers are used as an ingredient in a great number of patterns, tiers know less about them, in general, than about other materials. True, dry fly hackles are well understood and have been thoroughly discussed in journal articles and texts such as *The Book of the Hackle* by Frank Elder. In addition, tiers are quite familiar with the properties of feathers such as pheasant tail, turkey tail, mottled turkey, peacock herl, mallard primaries, wood duck flank, and a few others. But what about other feathers?

Feathers on different parts of the bird perform different functions, and thus have different forms in terms of both overall shape and texture. Based on such variations, feathers of the body can be separated into neck (or hackle cape), throat, back, breast, rump (or saddle), flank (region covered by the folded wing), tail coverts, belly, and tail (Figure 1). The feathers of the wing can be separated into dorsal marginal coverts, lesser coverts, greater coverts, bastard wing, ventral marginal coverts, undercoverts, primaries, and secondaries (Figure 2).

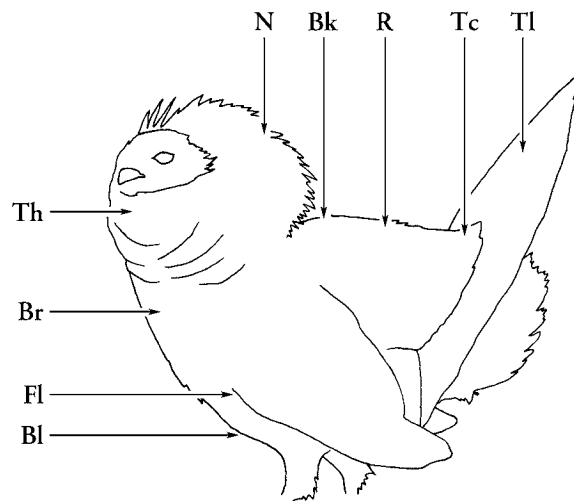


Figure 1. Typical feather regions of the bird body: N = neck (or hackle cape), Th = throat, Bk = back, Br = breast, R = rump (or saddle), Fl = flank (region covered by the folded wing), Tc = tail coverts, Bl = belly, and Tl = tail.

Feathers from the nape (hackle cape) may be elongate with relatively short barbs. Depending upon their stiffness, such feathers are very good for dry fly hackles or for heavily dressed soft-hackle flies. Or the nape feathers may be short and square tipped like those usually found on the throat. Such feathers make good nymph wing cases. Feathers from the back of the bird usually have rounded tips and heavy stems and barbs. That's because these feathers are exposed to the harshest of environmental factors and must also provide some protection against the teeth or talons of predators. Such feathers are useful to make the outer wings of grasshoppers or the shells of beetles. Breast feathers are often short and have squared tips and long, very soft barbs. They're also heavily endowed with long, basal, marabou fluff. Such feathers are useful as marabou soft hackles. Belly feathers are softer than breast feathers, but are sometimes longer and more rounded at the tips. These longer ones are useful where a very webby, marabou-type hackle is needed. Flank feathers tend to have less basal fluff than breast feathers and may vary from an elongate form to one with a squared end and long thin barbs. The barbs of flank feathers are often used for tails and wings of dry flies and legs

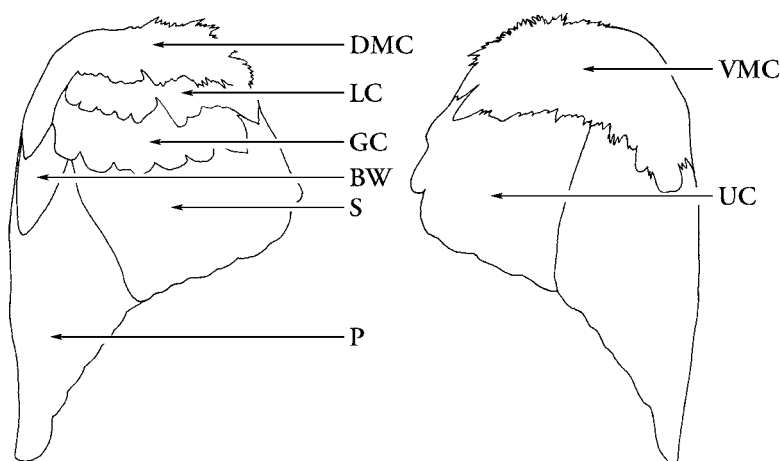


Figure 2. Typical feather regions of the bird wing (left: top side of wing, right: underside of wing): DMC = dorsal marginal coverts, LC = lesser coverts, GC = greater coverts, BW = bastard wing, VMC = ventral marginal coverts, UC = undercoverts, P = primaries, and S = secondaries.

of nymphs. Feathers of the rump patch are fairly long with a relatively thin stem and medium-length to long barbs. Often as much as half of the barbs are of the marabou type. These feathers make very nice hackles on larger flies—such as the Strip Leech—where the marabou fluff is an important component of the design.

In addition, rump feathers make excellent outer wings for grasshoppers. The stems of the tail coverts and tail feathers are usually too heavy to make these feathers useful for hackling purposes, but the barbs may be used for wings, tails, throats, legs, and other structures.

Dorsal and ventral marginal covert feathers of the wing are often of different colors (the ventral ones are usually of a lighter shade) but are shaped the same. They are relatively short feathers with medium-length barbs and medium-weight stems. They are also small. For example, it is not unusual to find the marginal coverts of grouse in sizes as small as 20 or 22. It is these feathers that have traditionally been specified for soft hackle flies. Undercoverts and the greater and lesser coverts are elongate feathers with medium length barbs and medium weight stems. These feathers are great for making “half” feathers for palmering Soft-Hackle Woolly Worms. The stems of the flight feathers (primary and secondary feathers) and those of the bastard wing feathers are too stiff and heavy to make these feathers useful for soft hackles, but the barbs are used for wings, tails, and legs.

When selecting feathers, I first consider the characteristics I’m trying to build into the fly. Then I consider colors, textures, barb lengths, and shaft diameters and how these features could contribute to the design. For example, when designing the Strip Leech, I wanted a feather that would add bulk and movement to the fly, and, because it would be basically an opportunistic pattern, I wanted the feather to provide a bit of attractive, iridescent flash. Pheasant rump feathers had soft barbs of sufficient length for use on the big flies while simultaneously offering iridescence. Furthermore, the large amount of marabou fluff at the base of the feather could add significant motion. The shaft diameter at the base of the feather was a bit large, but once I developed a method for handling it, this feather proved to be just what was needed.

To help you select feathers for your particular needs, I’ve listed many commonly available ones in the tables below. Use **Table 1** to select the birds having the general color(s) that you need, then go the **Table 2** to narrow the color selection and choose the feather type you need.

Table 1. (below) Selecting plumage according to general color requirements. Berger Color System (BCS) numbers are given in parentheses; “i” means iridescent. Those numbers separated by a slash (/) indicate a color between the two given BCS color numbers.

Color Needed: Possible Plumage

White (107): English grouse, sage grouse, mallard, Amherst pheasant
Pale gray (105): mourning dove, coot, Mearns quail
Grays (109, 110): scaled quail, jackdaw, Gambles quail, Mearns quail, California quail
Dark grays (113/114, 117): American woodcock, coot, crow, jackdaw, magpie, spruce grouse
Olive grays (108, 108/112): mallard, scaled quail, spruce grouse, ruffed grouse, blue grouse, Gambles quail, California quail, scaled quail, Bob White quail, English grouse, golden pheasant
Dark olive gray (116): golden plover, moorhen, starling, coot, spruce grouse, Amherst pheasant
Charcoal (114): coot, Gambles quail, mourning dove
Mottled grays: blue grouse, sage grouse, Mearns quail
Black (118): crow, jackdaw, kingfisher, red pheasant
White and black barred: silver pheasant, Amherst pheasant
White mottled with grays or browns: moorhen, golden plover, blue grouse, Amherst pheasant, ringneck pheasant, Bob White quail, snipe
Gold (50, 67): golden pheasant
Buff (58): Courtnix quail, chukkar, hen ringneck pheasant
Dark tan (94): California quail, Gambles quail, scaled quail
Oranges (73, 76): red pheasant
Orange browns (60-63): American and English woodcock, Courtnix quail, English grouse, jay, kingfisher, red pheasant
Red browns (65, 66): Bob White quail, ruffed grouse, kingfisher, golden pheasant
Dark browns (64, 87, 98, 99): snipe, jay, chukkar partridge, Courtnix quail, cock ringneck pheasant
Mottled browns and browns mottled with blacks: ringneck pheasant (cock and hen), chukkar partridge, snipe, bobwhite quail, English grouse, ruffed grouse, English woodcock
Blue (i136): kingfisher
Purple blue (i128): magpie, silver pheasant
Deep purple blue (i144/145): Amherst pheasant
Purple (i130): starling
Deep purple (i132): golden pheasant, silver pheasant
Light blue gray (i105): ringneck pheasant
Dark blue gray (i141): kingfisher
Green (i22, i23): Amherst pheasant, starling
Dark green (i10): ringneck pheasant
Gray green (i6): golden pheasant
Dark gray green (i9): Amherst pheasant
Medium olive (i28): ringneck pheasant
Dark olive green (i33): Amherst pheasant
Bronze (i86): ringneck pheasant
Scarlet (i81): golden pheasant

Table 2. (below) Specific colors of feathers from various bird plumages; some are listed as wings only, others as entire capes. This table is not meant to be a complete listing of all available or useful plumage. N = nape; Th = throat, Bk = back, Br = breast, R = rump, F = flank, Bl = belly, Tc = tail covert, DMC = dorsal marginal covert, VMC = ventral marginal covert, GC = greater covert, LC = lesser covert, UC = under covert. Numbers refer to the Berger Color System. Those numbers separated by a slash (/) indicate a color between the two given color numbers. The given colors indicate the most prominent shades of the feathers; natural variations may occur.

Wing Plumage

Crow

DMC, GC, & LC: black (118) with indigo (132) iridescence

VMC & UC: dark blue gray (117)

English Grouse

DMC: orange brown (63) barred with black (118)

GC & LC: black (118) with orange brown (63) bars

VMC: medium olive gray (112) mottled with orange brown (63) and white (107)

UC: white (107)

English Woodcock

DMC: orange brown (63) mottled with black (118)

GC & LC: orange brown (63) to medium orange brown (60) mottled with olive gray (108)

VMC & UC: buff (58) mottled with medium olive gray (112)

Golden Plover

DMC, GC & LC: dark olive gray (116) marked with light orange (67)

VMC: mottled dark olive gray (116) and white (107)

UC: white (107) mottled with light dun brown (95)

Jackdaw

DMC, GC & LC: black (118) with indigo (132) iridescence

VMC & UC: dark blue gray (117)

Jay

DMC, GC, & LC: dark dun brown (99)

VMC & UC: dark tan (61)

Magpie

DMC: almost black (118) with hint of iridescent green (i10)

GC & LC: dark iridescent purplish blue (i128)

VMC & UC: dark blackish gray (117/118)

Mallard

DMC, GC, & LC: dun gray (108/112)

VMC & UC: white (107)

Moor Hen

DMC, GC & LC: dark olive gray (116) with dark olive drab tint (103)

VMC: white (107) spotted with charcoal (114)

UC: charcoal (114) spotted with white (107)

Mourning Dove

DMC, GC, & LC: charcoal (114) washed with medium olive drab (100)

VMC & UC: light blue gray (105)

Capes

Chukkar

Bk, DMC, GC, LC: dark dun brown (99)

F: barred with black (118), medium brown (87), and buff (58) bars

R: medium olive gray (112)

VMC & UC: buff (58)

Coot

N, Th, VMC, & UC: charcoal (114)

Bk: dark blue gray (113/114)

Br, F, & Bl: light blue gray (105)

R & TC: dark olive gray (116)

DMC, GC, & LC: dark gray (114/117)

Grouse, Blue

Th & Br: white (107) with dark blue gray (117) tip

Bk: olive gray (108) with dark tan (61) mottled tips

R & TC: dark olive gray (116) with medium gray (110) mottles

Bl: charcoal (114) with white (107) tips

DMC, GC, LC & VMC: olive gray (108) with charcoal (114) bars and buff (58) mottles

UC: white (107)

Grouse, Ruffed

N: mottled orange brown (63) and black (118)

Th: light orange brown (60) with ecru (91) and black (118) bars

Bk, R, & TC: red brown (87) speckled with dark olive gray (116), ecru (91) eye on feather

DMC: dark brown (64) with buff (58) edges and center

GC & LC: red brown (66) with buff (58) along stem

VMC & UC: medium olive gray (112) with white (107) tips

Grouse, Sage

VMC: white (107) with dark olive gray (116) bars

UC: white (107)

All other feathers: dark olive gray (116) with buff (58) and ecru (91) bars and spots

Grouse, Spruce

N: charcoal (114)

Th: white (107) with charcoal and buff (58) mottles

Bk: dark olive gray (116) with dark tan (61) bars

R & TC: dark olive gray (116) with dark tan (61) and medium gray (110) mottles

Bl: medium gray (110) with white (107) tips

DMC: olive gray (108) with dark tan (61) edges

GC & LC: olive gray (108) with dark tan (61) mottles

VMC: same as **DMC** or white (107)

UC: white (107)

Kingfisher

N & Br: dark red brown (65)

Th: dark gray green (9)

Bk & LC: iridescent dark blue gray (i141)

R: iridescent blue (i136)

F: white (107) base with sandy (61) tip

Bl, VMC, & UC: sand (61)

DMC: dark red brown (65/66)

GC: black (118)

Pheasant, Amherst

Crest: small feathers iridescent dark olive green (i33), elongate feathers scarlet (81)

N: white (107) edged with iridescent purple-black (i129)

Th, Bk, & Br: iridescent green (i23) edged with black (118)

R: iridescent dark gray green (i9) tipped with orangish yellow (50)

F & Bl: white (107)

Tc: black (118) tipped with a bar of white (107) followed by a bar of scarlet (81)

DMC: dark olive gray (116)

GC & LC: iridescent purplish blue (i144/145)

VMC & UC: brown (87) mottled with white (107)

Pheasant, Golden

Crest: short feathers red orange (76), long feathers gold (50)

Nape: top portion deep orange (73/76) with black (118) bars, lower portion iridescent gray green (i6) edged with black (118)

Th, Br, & Bl: iridescent scarlet (i81)

Bk, R, & Tc: gold (67)

F: red brown (66) tipped with iridescent scarlet (i81)

DMC: red brown (66) barred with black (118)

GC: deep orange brown (66/76)

LC: iridescent deep purple (i132)

VMC: red brown (66)

UC: olive gray (108)

Pheasant, Red

Crest: black (118)

N & Th: rusty orange (76)

Bk, R, Tc, DMC, GC, & LC: dark olive gray (116) barred with pale tan (91) and dark tan (71) with black (118) center and ecru (92) eye

Br, F, & Bl: rusty orange (76) with pale blue gray (134) eye

VMC: orange (73)

UC: pale rusty orange (60)

Pheasant, Ringneck, Cock

Crest: dark olive tan (29)

N: iridescent dark green (i10) with white (107) collar

Th: same as N and iridescent bronze (i86)

Bk: light rosy orange (68) with white (107) and dark olive gray (116) center, dark green (10) tips; also red brown (83) with ecru (91) and black (118) mottled center

Br: iridescent bronze (i86)

R: iridescent medium olive (i28) to iridescent light blue gray (i105) barred with ginger (54) and dark olive gray (116)

DMC: dark brown (64) with light blue gray (108) bars and tips

GC: dark ecru (104)

LC: iridescent bronze (i86) with ecru (91) center

VMC: white (107)

UC: light gray (106) washed with medium ginger (51)

Pheasant, Ringneck, Hen

N & Th: light dun brown (95) variously barred with black (118) and dark orange brown (66)

Bk: light dun brown (95) with black (118) and buff (58) barred tips

F: pale ginger (48) to buff (58) with dark brown (64) bars

R: black (118) with pinkish (69) edges

Bl: ecru (91) with medium olive gray (112) bars

DMC, GC, & LC: buff (58) with dark brown (64) bars

VMC & UC: mottled pale tan (91) and buff (58)

Pheasant, Silver

Crest: iridescent deep purple (i132)

N & Br: black (118) with indigo (i132) iridescence

Bl: dark olive gray (116)

All other feathers: white (107) with black (118) bars

Quail, Bob White

N: medium brown (87) mottled with black (118)

Th: light rosy orange (68)

Bk: medium brown (87) with black (118) bars and mottles

Br: dark pinkish tan (71) with black (118) bars

R: yellow brown (62) barred with charcoal (114) and ecru (91)

Quail, Bob White (continued)

DMC: olive gray (108) with dark orange brown (66) blotches
GC & LC: red brown (66) with pale tan (91) and dark brown (64) bars
VMC: olive gray (108) with white (107) bars
UC: medium gray (110) with white (107) bars

Quail, California

N & Th: mottled grays (105, 109) with charcoal (117) edges and center
Bk: smokey gray (108) to medium olive gray (112)
Br: blue gray (109)
R & TC: medium olive gray (112)
F: rusty brown (66) tipped in black (118), to creamy orange (48) with brown (102) edges and center, to dark olive gray (116) with white (107) center
Bl: creamy orange (48) with brown (102) center
DMC, GC, & LC: smokey gray (108) tinted with rosy tan (121)
VMC: buff (94) with rosy brown (99) overtones
UC: medium gray (110/114)

Quail, Courtnix

N: orangish tan (62/63) with charcoal (117) and pinkish tan (58) centers
Th & Br: fleshy tan (61) with red brown (66) mottling
Bk, R, & Tc: brown (87) with black (118) mottles and creamy orange (48) center
F: fleshy tan (61) with black (118) mottles and pale tan (91) center
Bl: pinkish tan (58) with red brown (66) and black (118) mottles
DMC, GC, & LC: brown (87) tinted with smokey gray (108)
VMC: pinkish tan (58)
UC: white (107)

Quail, Gambles

N, Th, Bk, R, & Tc: smokey gray (108) with rosy tan (121) overtones
Br: medium gray (110) tipped in creamy tan (91)
F: dark rusty brown (83) with white (107) center
Bl: creamy tan (91) with dark rusty brown (83) center
Wings: same as **California Quail**

Quail, Harlequin or Mearns

N: mottled white (107) dark tan (61) and olive gray (108)
Th, Br, & Bl: charcoal (114) mottled with white (107)
Bk: black (118) with dark tan (61) bars and white (107) along stem
R: mottled light blue gray (105), dark tan (61), and black (118)
Tc: same as R and with white (107) along stem
DMC & VMC: medium blue gray (109) with white (107) spots
GC: medium blue gray (109) with black (118) spots and white (107) along stem
LC & UC: light blue gray (105)

Quail, Scaled

N: blue gray (105/109) tipped in charcoal (117)
Th: pale blue gray (105) tipped with charcoal (117)
Bk, R, & Tc: smokey gray (108) tinted with rosy tan (121)
Bl & Br: creamy tan (91) tipped with charcoal (117)
F: same as **Bk**, but with white (107) center
Wings: same as **California Quail**

Snipe

N: mottled tan (58) and dark brown (64)
Bk: black (118) with buff (58) tips
F, VMC, & UC: white (107) barred with dark brown (64)
Tc: dark orange brown (66) barred with black (118)
DMC: dark chocolate brown (98) with white (107) tips
GC & LC: dark brown (64) tipped with ecru (91)

Starling

N & Th: iridescent purple (130) tipped in tan (94)
Other body feathers: iridescent green (22) tipped in tan (94)
DMC, GC, & LC: dark olive gray (116) with dark blue green (22) iridescence, edged in medium ginger (51)
VMC & UC: dark olive gray (116) edged with medium ginger (51)

Woodcock, American

N, Bk, R, & TC: dark olive gray (116) with pinkish ginger (54) bars
Th: medium gray (110) washed with pinkish ginger (54)
Br, F, & Bl: light orange brown (60) to buff (58)
DMC: dark olive gray (116) with light orange brown (60) edges
GC & LC: light orange brown (60) with dark olive gray (116) bars
VMC & UC: dark tan (61)

- END -

