

N INABILITY TO CHOOSE the correct fly for the type of fishing situation encountered can prevent even veteran fly fishers from progressing beyond entry level success. Indifference toward fly selection is a self-imposed barrier to success. The most accomplished fly fishermen perceive the value of knowing what trout eat and how best to duplicate trout foods. For this growing number of aggressive, curious, and efficient fishermen, improved fly patterns are just as important as the latest computer-designed rod tapers or the space-age alloy in a \$500 reel.

Sales of trout flies number in the millions, and competition is fierce. When a new idea or material shows promise, fly makers usually rush to get on the band wagon. Revolutionary flytying discoveries are rare, but recently one material, though not actually new, began causing a stir among fly fishers, fly tiers, and the fly-fishing industry. The material is called Cul de Canard, or CDC, and it shows promise for a variety of contemporary and traditional fly patterns. (CDC is an Orvis registered trademark.)

CDC Biology

THE FLOTATION PROPERTIES of duck and goose feathers are well known, but the explana-

tion for these valuable characteristics is not. If you have observed waterfowl on land or water, you may have noticed that the birds are almost constantly preening themselves. Every duck or goose has an oil gland near the base of its tail. The bird reaches back with its bill to obtain the secreted oil, then systematically arranges and waterproofs each individual fiber of the functional flight and protection feathers. The downy feathers that surround and protect the oil gland are called Cul de Canard by the French, which roughly translates "butt of the duck." CDC feathers are small, drab, and uninspiring; individual feathers range from about 1/4 inch to 13/4 inches in length. They resemble miniature marabou plumes in appearance, and as a fly-tying material, they are remarkable. Cul de Canard is currently being marketed under such names as Duck Hackle and Quackle, but the initials CDC seem to be the common international reference to this hot new fly-tying topic.

European tiers have used CDC for years, and we should give credit to our overseas counterparts for introducing us to this uniquely versatile material. Until recently, the major drawbacks of CDC were prohibitive cost and lack of availability in the U.S., two factors that easily excluded the material from use in

my fly tying. There are only a couple dozen CDC feathers on an adult bird, and no one in the U.S. put much effort in gathering CDC. Those who did wanted an arm and a leg for a small quantity of feathers. Like many Americans, I had heard and read the praises of CDC, but my skeptical nature prevented me from investigating the material until late 1989.

When Doug Siepert, a friend and local materials supplier, announced that he had found a reliable source for CDC in volume, I took notice. Later in January 1990, Dennis Black of Umpqua Feather Merchants gave me an enthusiastic report of his expe-

riences fishing CDC flies in New Zealand. He, too, told me that the supply of CDC was improving. With spring approaching, I decided to get some of the feathers and find out more about the material.

Early Experiments

By LATE JANUARY I HAD TIED some CDC flies and tested them. From the beginning, it was clear that the material floated well, but so does a wine-bottle cork. There had to be more to the allegations surrounding CDC than mere flotation.

Midges are the name of the game if you are looking for surface

action in winter, so I focused my preliminary CDC-fly efforts on those miniscule aquatic insects, which can emerge in frigid temperatures. There are plenty of off-season fishing opportunities near my home, and the two forks of the Snake in Idaho and the Madison in Montana provided many opportunities to experiment. The largest and most selective fish stay deep in the winter, and fooling juvenile and young-adult trout with a new fly is no great accomplishment. Catching those small fish, however, was great light-tackle sport, and what I learned about CDC during my mid-winter outings proved helpful when spring brought the real players up from the depths.

I had difficulty making CDC feathers behave until I stopped fighting with them. I learned early that it was easier to treat the marabou-like material like hair or flank feather fibers rather than try to wrap it on a hook like conventional hackle. By varying the amount of the individual fibers according to the size of the fly and its purpose, I was able to effectively incorporate CDC into a broad range of fly sizes and styles. For size 20 to 24 midge patterns a little material goes a long way. Only a very small amount of CDC placed in the wing and leg area of midge adult imitations provided optimal flotation. Larva, pupa, and emerging styles

required as few as a half-dozen CDC fibers for accurate positioning in or near the surface film. The material works especially well for patterns designed to float in the surface film.

As spring drew near and water temperatures increased, so did the size and numbers of hatching aquatic insects. More experienced trout began to stir, and my scrutiny of my experimental flies became progressively more acute. By March, the midges, which hatch all year, began to overlap with early Baetis, the first mayflies of the season. Mayflies differ dramatically from midges in both appearance and behavior, and therefore they presented a new set of problems to address.

Winterlike conditions often extend well into early spring in the Rockies, and cool, damp, and overcast weather can keep mayfly duns on the water for long periods. Trout zero in on surface-bound duns, and an accurate imitation of the fully emerged insect is often the most productive style. CDC dry flies work best when designed and

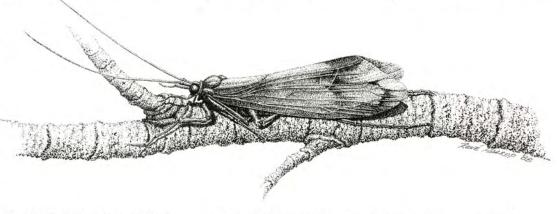
constructed to put as much of the material in contact with the water as possible without overloading the fly. This can cause a problem on flies that have an elevated wing. I discovered that slanting paired CDC feathers at about a 30-degree angle back over the body brought the lower wing fibers back along the sides of the fly. This produced the correct wing angle and, along with forked tails of cock hackle fibers, provided both balance and support. Winging with full CDC feathers is similar to using hackle tips, but the result still resembles a clump of individual fibers.

Many mayfly emerging patterns require short, low-angled wings. CDC comfortably accommodated the reduced flotation demands of these hard-to-see but deadly effective flies. Fished in the film where trout target developing adults, emerger patterns are frequently the solution when ideal weather conditions allow freshly hatched duns to escape quickly from the water.

Mayfly spinners offered perhaps the best opportunity to capitalize upon the attributes of CDC feathers. Sparseness is the key in duplicating the delicate flushfloating spent adults. Minor amounts of CDC extending laterally from the sides of the thorax were enough to support the fly and simulate the glistening transparent wings of the natural.

As the season reached full swing in the Yellowstone area, so did the complexity of the fishing. The variety of insect types now made early-season angling seem simple. The ever-increasing demands that accompanied multiple hatches, changing conditions, and heavier fishing pressure intensified the severity of the testing. Access to more-distant waters broadened the scope of my CDC experiments, and the range of comparisons increased.

Caddisflies typically become a factor when minimum daily temperatures remain above freezing. Three months of onstream experience with CDC flies eased the task of integrating the material into a variety of useful caddis patterns. Decades of experience on some of the toughest waters in the West have taught me that it is often best to fish lively duplications of the emergence phase when caddisflies are active. Caddisflies tend to change rapidly from stage to stage, and they quickly make the transition from their subsurface phase to their winged-adult stage. Trout are attracted



to individual insects by the pupa's rapid ascent to the surface. A typically brief period of vulnerability exists while the adult struggles for release from the confinement of the previous stage. This is not always easily accomplished, and some caddis remain in a precarious, partially emerged state. Because trout recognize and respond to emergers in this predicament, I directed many of my experiments toward developing fly patterns that addressed the phenomenon. Fishing caddis

Classic Flies

Five of the author's CDC

flies (left to right): Gray

Midge Adult, Pale

Morning Dun Tailwater Dun, Aquatic Wasp,

Captive Dun, and PMD

Transitional Nymph.

emergers produced some of the most credible evidence of the effectiveness of CDC flies.

Like mayflies, caddisflies end their lives on the water after mating and ovipositing. When the near-lifeless insects lie inertly on the sur-

face, they are powerless to escape watchful trout. High-floating fully dressed caddis adult patterns are popular because they are easy to see. They work well when they are fished on fast currents or a coarse surface where the visibility of the fly to both fish and fisherman is diminished. Gentle, smooth flows and clear shallow water, however, have different requirements. The thrifty application of CDC in the horizontal wing of a caddis-adult pattern creates a realistic replica that is bulk-free yet remarkably able to stay afloat.



CDC Green Drake

Spring creeks, tailwaters, and the edges of even the roughest trout streams have conditions that demand accurate visual and behavioral performance from an artificial. Trout in lakes and

stillwater situations can take what seems an eternity to decide to accept or reject your offering, so the pattern must look and behave realistically. CDC offers tiers a new way to incorporate that realism into their flies.

Terrestrial CDC Flies

SUMMER PRESENTED EVEN MORE CHALLENGES for me as streamside vegetation began to flourish.

therefore, more likely to be available to trout. Insects that live on land are completely out of their element when they find themselves on the water, and they often wiggle and squirm while trying to escape the surface tension. CDC fibers can be effectively incorporated into flies that imitate clumsy land-based insects that are kept afloat by surface tension. On placid meadow water where terrestrials occur in large numbers, extreme flotation is not the supreme factor, so I used minimal amounts of CDC to realistically define the various insects without compromising the functional characteristics that distinguish terrestrials from aquatic insects.



Summer is typically brief in the high country, and signals of autumn began to arrive near the end of August. On most accessible waters the effects of daily pounding left the trout difficult to approach and nearly impossible to fool, requiring highly refined strategies and fine-tuned techniques. Reduced flows had smoothed the surface and reduced the velocity of most streams. Extreme water

from Cul de Canard Feathers











Nonaquatic insects constantly find their way from the vegetation to the water. A grasshopper landing on the water can induce an almost suicidal strike from a hungry trout. Individual feather size restricts how large you can tie CDC flies. I obtained respectable results on hoppers up to size 10 by using the material for legs and the underwing, but a size 14 pattern seemed most effective.

Smaller terrestrials such as ants, beetles, and leaf hoppers are more numerous and less mobile and, clarity allowed trout to scrutinize potential food items. Impulsive takes were rare.

The heightened demands of the late season provided the most conclusive evidence on the effectiveness of CDC. By October I had fished CDC imitations of virtually all the insect types that are normally encountered in the West in the course of a year. The flies had been judged by the harshest of critics-selective trout-and I felt comfortable with the conclusions I

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Cul de Canard . . .

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had drawn from eight months of testing.

From the beginning, it was not my intent to simply discover if I could catch fish on flies tied with CDC material; that I could was a given. It was much more important to learn how CDC flies measured up against the proven patterns I normally used.

A full season of testing and evaluating CDC provided answers to many of my questions, but I ended the year with the feeling that I had barely scratched the surface. The jury is still out on CDC; the angler will deliver the final verdict. CDC will have a considerable influence on fly design and tying in the coming years. Flies tied with CDC have merit and will find their place in the arsenal of modern fly fishermen.

Tying and Fishing CDC

CDC DIFFERS IN SEVERAL WAYS from other support-type materials such as cock hackle or elk or deer hair. Much has been made of the fact that CDC itself does not require the addition of dry-fly floatant to keep it afloat. (Some floatants can destroy the functional properties of the material.)

The widespread notion that CDC flies are unsinkable is a misconception that has created unrealistic expectations, and those who subscribe to this misconception will be disappointed. CDC floats extremely well, and anglers can expect excellent fastwater performance from dry flies that are tied with larger amounts of the buoyant material. Such patterns make fine attractor flies for float-fishing and pocketwater fishing on choppy currents where maximum flotation and fly visibility are advantages. Eventually, however, even overdressed CDC flies become waterlogged, especially when they are repeatedly taken under by fish. A saturated CDC fly requires maintenance and should be rinsed thoroughly in clean water then blotted to restore it to working condition.

It is a mistake to think that you can just slap a bunch of CDC on a hook and immediately have a perfect fly. Exacting requirements prevail on hardfished water, and a strong characteristic of flotation is only one consideration of a surface fly. Elements of balance, shape, proportion, and color are important. Flies designed to be fished to ultraselective trout must accurately reflect the appearance and behavior of the natural insects they imitate. Poorly designed or improperly tied flies are worthless whether they are tied with CDC or anything else.

Most natural insects are soft, and so is CDC. The surprisingly strong fibers

and center stem make it possible to produce a fly equally durable to one tied with more familiar materials.

A phenomenon associated with instream emergence of aquatic insects enables trout to distinguish between what is real and what is artificial. Gases trapped inside the nymphal or pupal skin of the insect are released to form bubbles that help lift the metamorphosing insect toward the surface, and signal emergence to trout. Small reflective craft beads, Flashabou, and mylar tinsel have been used to create the illusion of the silver bubbles of life. Gary LaFontaine had this in mind when he developed his sparkle yarn caddis patterns. The unusual spiraled characteristic of CDC gives the material the ability to trap air and form its own troutattracting bubbles. That feature proved to be tremendously effective on numerous spring creeks and tailwaters like the Henry's Fork, where I conducted much of my CDC research.

Sparsely dressed CDC imitations float better than average, but they will not always pop back to the surface when pulled under, as many fly fishermen expect them to do. Since dry-fly floatant is generally not applied, it may be necessary to use an extra false cast or two to snap excess water from a CDC fly. Do not slam the fly down on the water unless you want it to penetrate the surface film.

CDC can also add beneficial action and appearance to imitations of subsurface life forms such as nymphs, larvae, and scuds. Moving parts like legs, gills, antennae, and tails are points of interest that can receive lifelike enhancement from CDC.

The cost of good CDC feathers is about the same as top-quality dry-fly hackle.

Cul de Canard Sources

Orvis Historic Route 7A Manchester, VT 05254

Umpqua Feather Merchants Box 700 Glide, OR 97443

The Fly Hatchery P.O. Box 27 Forest Hills, NY 11375

Mouches Devaux Champagnole S.A.R.L. 10, Rue du Pont de l'Epee 39300 Champagnole (France)

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RENE HARROP is a professional fly tier from St. Anthony, Idaho.

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