

# UNDERSTANDING DRAG

## *Three steps to better presentation*

DEAN SCHUBERT  
AND DAVID HICKSON

CATCHING TROUT WITH A FLY involves two essential factors—imitation and presentation. Imitation (matching your fly as closely as possible to what the fish are feeding on) can be critical when the trout are selectively taking a particular insect. Most often, however, trout are opportunistic and will accept a variety of offerings. Presentation, on the other hand, is *always important* and deserves the most attention. Unfortunately, fly-fishing literature devotes much more space to fly patterns (we're all looking for the "irresistible" fly) than to techniques for properly presenting our imitations.

In most stream environments aquatic insects form the bulk of a trout's diet. While some winged adults flutter across the surface and a few nymphs are agile swimmers, most insects are at the mercy of the currents. Trout, particularly large fish, prefer to lie and wait for the current to carry food to them, and in heavily fished waters they can be amazingly adept at discerning the slightest hint of unnatural behavior in a drifting fly.

From the moment your cast hits the water, varying currents begin to tighten your line and pull at your imitation—either speeding its drift relative to the flow, slowing it down, or sending it arcing across the current. In moving water, eliminating unnatural motion, or "drag," is the single most important factor in your angling success. Ideally your imitation should drift naturally, as if dropped into the current with no line or leader attached. Many experienced fishermen reach a plateau in their learning and, hence, fishing abilities, because they fail to recognize drag, a phenomenon that appears extremely subtle to an angler from 30 or 40 feet away but is glaringly obvious to a trout just inches away from the fly.

The trick to combating drag is buying enough time, by maintaining slack in the line, for the fly to reach the fish in a realistic manner. While drag is inevitable, the length of drag-free drift will vary in each situation. In

slow uniform currents a drift of 40 or 50 feet might be possible. In faster broken flows as little as one or two feet may be the only practical presentation. In every situation, the longer your fly drifts naturally, the more fish you'll catch. Your knowledge of currents, line control, experience, and proper tackle selection play a role in this often subtle aspect of fly fishing. Like fingerprints or snowflakes, there are an infinite number of different situations. Learning to read the currents and make adjustments in your casting and line handling is perhaps the most rewarding aspect of fly fishing.

To help understand drag, let's define it in three

forms: primary, secondary, and tertiary. Primary drag can be controlled by immediate manipulation of the line. Secondary drag requires forethought in positioning the line in anticipation of drag occurring beyond the range of normal line control. Tertiary drag is a direct result of rod, line, leader, and tippet selection.

### Primary Drag

MOST BASIC IS PRIMARY DRAG. By definition drag is temporal in nature: From the second your fly line hits the water varying currents begin acting on the line and leader. Controlling drag traditionally has been a matter of a few

simple rod- and line-handling methods that allow you to achieve a reasonable length of drag-free drift.

Primary drag is any drag that can be countered, *as it occurs*, by the manipulation of the rod and line. "Mending" is the term used to describe changing the position of the line, either in the air during casting or on the water after the cast has been made, to counter the effects of varying current speeds.

Once the cast is made, you need to readjust or mend the line and leader to counteract the effects of changing currents as your fly drifts downstream. For example, a loop of line may be pushed downstream



*To get longer drag-free presentations, you must understand primary, secondary, and tertiary drag and how to combat each.*

TIM AND JILL LEARY PHOTO



of the fly. If not corrected this loop will tighten and accelerate, causing the fly to be pulled downstream. The fisherman must delicately break the surface tension that holds the line and flip the loop back upstream of the fly.

There are three tricks to on-the-water mending.

1. Don't wait until the line has pulled tight and the fly is dragging before you mend. Anticipate when and where drag will occur and correct for it early in the drift. Plan ahead.

2. Use the full length of your rod, whether it be seven or ten feet long. Don't be lazy—at the end of a drift, a long reach downstream with both your arm and rod can give you the added drag-free inches needed to effectively cover a fish.

3. Allow line to slide through the guides when mending. This creates less pull on the fly line and

retains what slack is already there. Mending is most often used in downstream presentations. Since the fly is moving away from you, feeding slack while mending will lengthen your line and forestall drag.

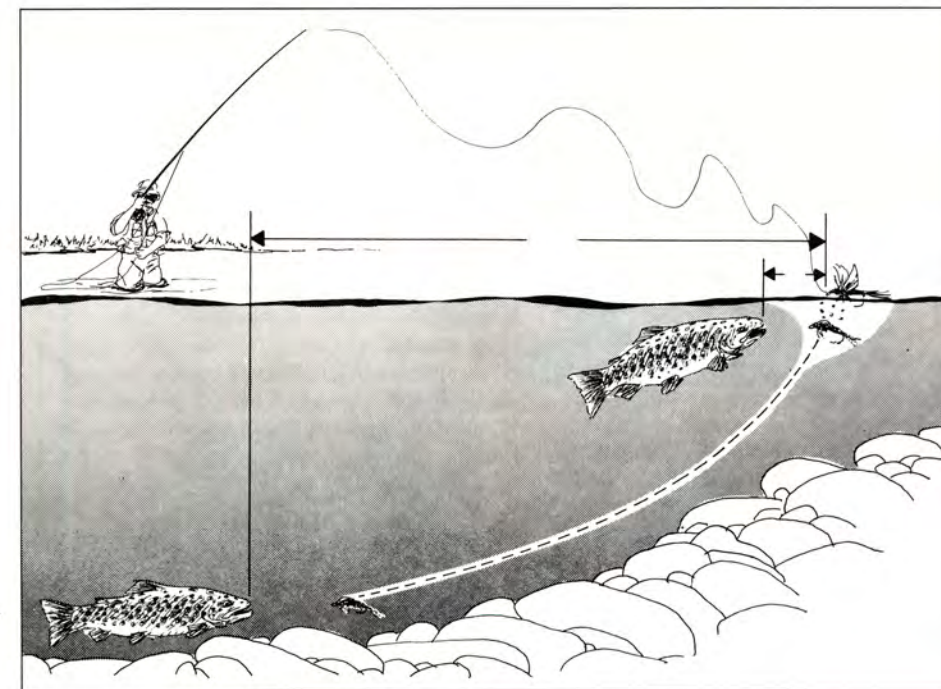
Unfortunately, mending after the cast is made is a double-edged sword—the tension required to adjust for varied currents often removes any coils of slack induced in the initial cast.

After a particularly difficult day of fishing in heavy pocketwater, a friend once remarked that the key to increasing your catch is learning how to mend correctly. "Close," we replied. "The key to catching more fish is learning to cast so you don't have to mend."

The time needed to mend after the cast is on the water can take crucial seconds off of each drift. Rarely is a straightline cast useful in moving water. Invariably

## LEADING THE FISH

*You should cast about a foot upstream of a fish holding inches below the surface. Yet you may need to lead a deep-lying trout by 10 or 15 feet. Similarly, weighted nymphs require enough time and distance for the fly to sink to the desired depth.*



## SOLVING THE SITUATION



*Which position(s) make for the best presentation of the fly to the fish?*

1. Choose the line of approach between you and the fish that has the least change in current speed. Positions A, B, and C require casting across rapidly moving currents, causing primary drag on the line.

2. Get as close as practicable to the fish. Casts from positions A, B, and C will spook the fish, which are facing upstream in shallow, clear water.

3. The fish are close to the surface, but brush and wind prevent casting to the top left fish and require a very accurate dump-cast to take the lower fish. A "hit 'em on the head" left-curve dump-cast did the trick from position D.

4. Position D is the best presentation position. Casts that will work from there: straight upstream dump-cast, left-curve cast, and left-curve dump-cast. A long wiggle right-hand reach cast from position B is a possibility—a tough one but makeable.

if you cast a straight line in moving water, your fly will drag instantly, whether it appears to or not.

Ideally you should cast your line in such a fashion as to correct for differing currents. Such casts are called "aerial mending" and are the most valuable tool in eliminating primary drag. By moving the rod tip out of the casting plane during the forward loop, you can change the shape of or induce slack into the fly line before it lands.

A number of such casts have evolved to aid in reducing drag—the S-cast, the wiggle or serpentine cast, shock casts, reach casts, and a variety of left- or right-curve casts. Read about, practice, and master these casts.

[Fly Fishing Strategy, by Doug Swisher and Carl Richards, is a good source for instruction on how to perform many of the specialty casts. Copies are available at fly shops and from Lyons and Burford, Publishers, 31 West 21 Street, New York, NY 10010, (212) 620-9580. THE EDITORS.]

Valuable time is lost mending the line once the fly is on the water. In fast pocketwater a drift may last only seconds. Learning to cast so the line lands positioned to drift correctly can spell the difference between success and failure. Even in slower currents, the added moments of drift gained by making the initial cast correctly can add several fish to your daily catch rate.

Remember, no two pools, riffles, or glides are alike. Even the most experienced fisherman may take many casts to figure out the proper mending sequence for an unfamiliar piece of water. You might even find yourself in a situation where no amount of fancy casting or tricky mending seems to give your fly a proper drift. Changing your position relative to the fish may be your only solution.

Proper positioning is the initial and often most important decision you make when approaching a visible fish or a suspected lie. So what is the proper position—upstream, downstream, or across? It depends; sometimes your choices are limited. Trees or brush may block your backcast; the water may be too deep for safe wading, or too shallow or clear, causing the fish to spook at any sudden movement. Local conditions can determine how you should approach your quarry. For example, on New Zealand's South Island wary brown trout in crystal clear water are usually best approached from below, whereas downstream presentations from above may bring greatest success with the tippet-shy rainbows of the Henry's Fork on the Snake.

All factors considered, your best choice of position involves several key elements in reducing potential drag (see Solving the Situation).

1. Choose the line of approach between you and the fish that has the least change in current speed. In most situations this will be either from above or below the fish—across-stream presentations usually have the most variation in flow.

2. Get as close to your quarry as practicable. The shorter the distance between you and the fish, hence less line, the less likely it is drag will occur. Your casting will also be more accurate. Upstream presentations usually allow you to approach more closely, since trout can't see directly behind.

3. Cast your fly the correct distance above the fish (see Leading the Fish). The longer your fly drifts, the more likely it is to drag before reaching its lie. Most neophytes cast either too far upstream or land the fly on the fish's head. A floating fly should land just outside the trout's "window of vision," a refractive phe-

*Continued on page 71*



## Understanding Drag . . .

*Continued from page 57*

nomenon that increases in size with the depth of the fish. You should cast perhaps a foot upstream of a fish holding inches below the surface. Yet you may need to lead a deep-lying trout by 10 or 15 feet. Similarly, weighted nymphs require enough time and distance for the fly to sink to the desired depth.

### Secondary Drag

AT SOME POINT YOU WILL NEED to extend your drag-free drift downstream beyond the range of simple slackline casts and mending—perhaps to present your fly to a fish far beyond casting range, maybe to cover large sections of water by prolonging your drift, or possibly because an obstacle (such as a midstream boulder or fallen tree) prevents normal line control. As your fly drifts beyond the range of your longest mends, the terminal end of your line will begin to drag, no matter how vigorously you shake the line or feed slack from above. This we will define as secondary drag.

Controlling secondary drag requires advance planning, since it can't be eliminated as it occurs. After the initial slackline cast is made, additional pockets of slack line must be strategically placed in the line. Roll casting toward the fly and allowing the loops to collapse is the most effective means of creating slack beyond the range of normal line-control techniques. This can be interspersed with conventional mending until enough slack is built into the line for its downstream journey.

Similarly, it helps to place extra coils of slack line as close to the fly as possible—think of it as a shock absorber. These coils of slack create enough surface tension to act as a cushion against further vigorous mending, without disturbing the drifting fly and leader. This may seem sloppy and a bit out of control at first, but at times it's the only solution to extending your drift on, for example, the wide and powerful trout and steelhead rivers of the West.

Obviously, the more slack on the water the more difficult it is to strike once a fish takes your fly—but better to strike and miss than not to have gotten a strike at all. Maintain enough slack to allow a good drift, yet no more than necessary.

Most fishermen feed line downstream by shaking the rod tip from side to side or up and down. We prefer instead to "throw," or cast, line toward the fly. Remember that slack line is most useful when placed close to your imitation. Slack near the tip of your rod does no good if the end of your fly line and leader are already dragging.

### Tertiary Drag

UNLIKE PRIMARY OR SECONDARY DRAG, many of the decisions controlling tertiary drag are made not at streamside but at your local fly shop or while you are ordering from a catalog. Tertiary drag is a result of the inherent qualities of your tackle. Long before you make your first cast the selection of your rod, fly line, leader, and tippet has predetermined a large portion of your ability to combat drag.

There are significant elements to consider when you are assembling your tackle that will pay big dividends onstream. Select your line, leader, and tippet with an eye toward minimizing the amount of surface area on which the currents can act. Choose your terminal tackle as limp or flexible as possible, and therefore more adaptive to the current. Make certain your line and leader are clean and well greased to float as high in the water as possible. This reduces the surface area affected by the current and makes it easier to pick up the line from out of the surface film when you are mending or casting. You may want to redress the end of your line, and particularly your leader, several times a day.

The tippet is of great importance in combating drag, due to its proximity to the fly. Entire articles have been written in search of the "best" tippet material—"best" usually being defined in terms of pound-test-to-diameter ratios or relative knot strengths. Actually there are a great many qualities to consider in choosing your tippet: tensile strength, stiffness, color, reflectivity, abrasion resistance, and stretch, to name a few.

Choose your tippet material based on those properties most important under the prevailing conditions. Yet only two of these qualities are significant in fighting drag: flexibility and diameter. Using the smallest-diameter material possible minimizes the surface area on which opposing currents can act.

Stiff materials may be terrific for casting accuracy and great on lakes; but on moving water limper, more supple materials respond readily to vagaries of the current and make it easier to pile slack line into the drift. Choose the smallest diameter tippet practical, keeping in mind that a flexible 4X may outperform a stiff 5X when it comes to presentation.

### Microdrag

SOME SLOW-MOVING WATERS, such as spring creeks, offer a particularly difficult drag problem. Undulating

*Continued on page 72*

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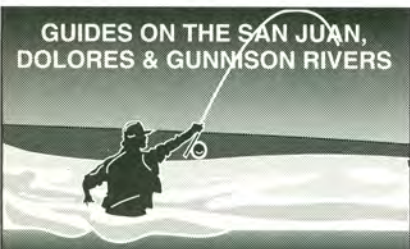
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Continued from page 71

weedbeds or other obstructions near the water's surface create a haphazard flow of complex and confused currents. Even if you follow all the rules of presentation, sometimes by the time the fly drifts to the fish, those small complex currents can have the fly wagging back and forth like the tail on a dog. We call this "microdrag." It is often the cause for refusal after refusal from highly selective fish, especially if they have several long seconds to inspect your fly.

Most fishermen change flies when they meet such difficult fish, and that's not always a bad call. Yet changing to a finer and perhaps longer tippet is more often the solution to the problem, and it is the only physical modification that can be made at this juncture to improve your drift. So many times after making 50 or 60 casts with no results, a tippet change can bring success on the very next cast.

Many fishermen believe that a finer tippet is more difficult for the fish to see, and therefore more effective at fooling them. But close inspection of the impression a leader makes in the surface film, and the resulting shadow, reveals that *all* tippets must be glaringly obvious to a trout. The true determining factor is the reduction of drag by use of a finer tippet with a smaller surface area. Remember, however, that the tippet you select should be adequate in strength to land a fish without playing it to exhaustion.

Pay attention to the selection of your leader length. While short, rapidly tapering leaders are great to cast, a longer leader can do wonders for your presentation by allowing more slack line to be induced into each drift. Given casts of equal lengths, a long thin supple leader is less affected by currents than the stiffer, thicker fly line. If you build your own leaders, it is even possible to construct "induced slack" tapers (by slightly reducing the length of the butt sections or lengthening the tapered terminal sections), causing the leader to fall in a series of gentle S-curves rather than straightening completely with each cast.

By now it should be clear that smaller-diameter, more supple lines can also be an advantage in tricky currents. Where longer drifts are critical (such as spring creeks), a 5-weight line responds better than a 7-weight to differing flows. When combined with other aspects, such as delicacy of delivery, this performance explains the success of lighter lines under demanding conditions. Of course, there are other factors to consider when you are deciding which

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weight line to use, and any decision involves compromises. A 3-weight, for example, is of little use in a 30-mile-per-hour wind. Use the lightest line you can cast comfortably and accurately.

Even within a given line weight there are considerations in the type of fly line you choose. Floating lines are available in double-taper and weight-forward, with shooting-tapers, and with a variety of specialty tapers. Choosing a line taper is also a matter



A longer rod allows you to hold more line off the water to avoid tricky current seams.

of compromise—a shooting-taper may maximize distance, while a double-taper allows for greater delicacy. Certain lines are superior for line control and mending. For dead-drift presentations with extended drifts, shooting-tapers, and to a lesser degree standard design weight-forward lines, are impractical; their smaller running lines won't easily mend their heavier forward sections. A double-taper or long-bellied weight-forward is a better choice, allowing mending either in close or at a considerable distance.

The Lee Wulff Triangle Taper line with its long tapering tip is very responsive to current flows, and the continuous taper makes mending easy on drifts as long as 50 feet (they also roll cast superbly). The Wulff lines also respond well to aerial mending. For example, a quick wiggle of the rod tip during the cast puts many small S-curves in the thin tapering tip section (where you need it most to fight drag) with gradually fewer and gentler curves in the thicker butt section. The heavy butt taper transfers energy effortlessly to the thinner forward sections, making even difficult mends seem easy. And for those rare, desperately long casts, the Wulff lines still offer the thin running line of a weight-forward taper (this also reduces line drag on long runs in heavy current).

For larger waters, Orvis recently introduced their new Steelhead-Salmon taper, available in 7- to 10-weight lines. This interesting configuration is a standard long-bellied forward-taper of about 40 feet (depending on line weight), with the addition of a 25-foot gradual rear taper followed by a long thin running line. These hybrid lines combine many of the line-control properties of double-tapers with the distance-casting ability of weight-forward lines.

Finally, the choice of your rod can be vital to your success. Use the longest rod conditions allow. Again there are compromises. Still, a long rod not only allows the greater mending and roll-casting ability crucial to controlling both primary and secondary drag, but also offers important advantages in reducing tertiary drag.

The longer the rod, the more line you will be able to hold off the water during the drift.

It is often possible to avoid several tricky current seams by simply lifting the line above them, or by reaching up, across, or downstream to extend your drift. Reducing the amount of surface area on which the current can act is one sure way to eliminate drag. When selecting a rod, or if you build your own, remember that slightly oversized guides can be a help in both casting and mending, allowing thicker floating lines to slide through more readily. Single-handed, progressive-tapered graphite rods of nine to ten feet are excellent choices.

POPULAR FLY PATTERNS come and go, and there have been innovations which seem to be at times more effective. Modern rods, lines, leaders, and tippet materials have made casting distance, accuracy, and fighting fish more easily acquired skills. But as your fishing experiences accumulate, your ability to use them onstream hinges primarily on your understanding of how water currents behave, and on improving your presentation. This learning never ends. You can always get a better drift.

DEAN SCHUBERT and DAVID HICKSON specialize in trout and steelhead indicator fishing. They live in Oakland, California.

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