Going Deep in the Name of Trout Research

By Kirk Deeter – Field & Stream, January 2007

I am a 6-foot-long cutthroat trout, wallowing near the bottom of Colorado’s South Platte River. The water is perfect, not too high, not too low, 48 degrees and clear. I’m holding in the current with other trout, watching bugs float by. One is drifting right at my head. I turn for a closer look and—foul hooked. I swim to the surface and spit the regulator out of my mouth. "Dang it, Bruce, you snagged me again." I’m in the middle of an experiment to find out what trout really do under the river surface. The only way to truly understand the fish, I figured, was to be the fish, so I got out my scuba gear and jumped in. Here’s what I learned.

Lesson 1. False Casts Ruin Fishing

I was able to slide right into a run without spooking trout. They weren’t bothered by a big bubble-blowing blob, so long as I moved slowly. But as soon as photographer Tim Romano moved the boom-operated underwater camera overhead, even ever so subtly, the fish scattered in panic. At one point, a shadow passed above and I saw fish slink away toward the rocks. When I surfaced to ask what had happened, they told me a blue heron had flown over the run.

More significantly, I watched from below as my friend Bruce Mardick made several false casts over the fish. As he whipped the line back and forth, the fish went ballistic and hid against the bank. After allowing them to recover, he started limiting false casts, even using roll casts, and the trout seemed undisturbed. The point: You get one, maybe two, false casts before the fish are onto you. Try to direct these at an angle behind the fish; only your final cast should target the run.

Lesson 2. You Miss a Lot of Strikes

Jeremy Hyatt, one of the top guides in Colorado, fished a nymph rig. I observed the fish inhaling the fly and spitting it back out like a sunflower seed. Hyatt never saw his indicator move and certainly never felt the fish. The perfect "dead drift," in which flies float with virtually no influence from the tippet and line, elicited more strikes, but the slack line caused more misses. Even the best anglers miss at least 50 percent of takes.

Just for grins, I suggested to my friend Anthony Bartkowski that he cast, mend the line and, once the drift was set up, count slowly to three, then set the hook. Sure enough, he got into a few trout that way. Next we tried a variation on the European style of nymphing. The angler uses heavily weighted flies, casts more directly upstream into the run, and essentially rakes the flies through the fish zone. I saw the fish eat the flies less often, but the percentage of hookups on takes improved.

I guess you have to pick your poison. A good compromise solution is to use that dead-drift technique but get in the habit of "mini-setting" the hook at the end of every drift. You’ll be surprised how often you’re buttoned on when you don’t expect it.

Lesson 3. Suspended Trout Rule

You can improve your odds in sight fishing by casting at the right fish. What do I mean? Say you’ve spotted three fish in a run. Two of them are essentially glued to the bottom, not moving much, while the third is suspended halfway up the water column, weaving back and forth, eating naturally. That’s your player, and it should be your target.
In one situation, Mardick was casting at a group of several fish, but only one of them was visibly suspended in the feeding lane. Instead of dredging the run for the fish on the bottom, he lightened his weight so the flies would drift midway up the water column. Sure enough, that fish ate it on the first drift. This happened just a few feet in front of my face.

Too many anglers make the mistake of chasing the biggest fish they see. If that big fish is hunkered down, you’re wasting an opportunity. Catch the fish that’s eating, then add another split shot and frustrate yourself by chasing difficult-to-catch bottom dwellers.

Lesson 4. Small Tippets Aren’t Necessary

I’ll never fish 6X or smaller tippet again. At least not in moving water, and certainly not on a nymph rig. I watched fish react the same way to a full range of tippets and flies, and dropping down in size on the tippet made no difference at all. Zip. I could see when the angler used 6X as readily as I saw 3X. Granted, I’m not a fish (just a writer pretending to be a fish), but I don’t think it mattered that much to the trout. At least that appeared to be the case when the water was moving at a rate of, say, 1 linear river foot per second or faster. You might as well have the advantage of stronger line.

Lesson 5. Current Speed Dictates Fly Size

When the fish are focused on a certain insect type, you want to pick a fly pattern that best imitates its size, color, and so forth. It’s not rocket science. But when the trout are eating opportunistically, you can and should use larger flies in faster water.

Here’s evidence that we gleaned from observing two sections of the exact same run, the Bridge Hole at Boxwood Gulch Ranch in Shawnee, Colo. At the top of the run, the water moved quickly through a riffle and side channel. At the bottom, the water pooled and moved slowly.

In the fast water, we watched via the remote camera as Hyatt hooked several fish on a rig with a No. 12 San Juan worm and a No. 14 Prince nymph. The fish could see these flies well but had less time to scrutinize them as they pulsed through the swifter water; the trout therefore made impulse reactions and ate the flies. At the bottom of the same run, however, in the slow water, the big flies weren’t catching any fish. We had to use a No. 20 RS2 to get just one strike (and not coincidentally, we had a harder time positioning the video camera in a way that didn’t spook the trout).

Faster currents allow you to get away with more, and sometimes those itty-bitty bugs get lost in the flow.

Lesson 6: Attractor Flies Work

I always fish two flies on a nymph rig. The first, suspended about a foot below my weight, is a larger attractor fly, like a pink San Juan worm or a Copper John. Then I tie another 12 to 18 inches of tippet to its hook shank and attach a smaller fly, a "morsel," on the bottom. This is my standard rig in fast water and often in slow water as well. In really slow, clear water, I use two small flies.

In theory, the first fly grabs the fish’s attention, and when it investigates, it sees the second one and eats it. Sounds like a stretch, but I witnessed this playing out. I positioned myself on the bottom about 4 feet downstream and slightly to the side of a big rainbow trout. Mardick cast, and I watched the fish notice the flies, turn around and swim right past me, as if to say, I’ll be right back, I have to check this out. He followed them (a yellow stonefly and a small red Copper John), apparently decided against eating them, then went to the exact spot where he’d been holding before. On the next cast, the flies swung by me, the fish turned and trailed them out of sight, then came swimming up the run right to his original spot. After
the third cast, the rainbow cruised by again, following the flies, only this time, he didn’t come back. I surfaced to see Mardick and Bartkowski netting the fish. He had eaten the bottom fly, falling victim to curiosity.

Lesson 7: All Strike Indicators Are Not Alike

From my in-water perspective, it seemed that strike indicators made of yarn did not freak the fish out as much as the solid-foam bobber kind. The fish would scatter away from the latter after it hit the water. I don’t know why; maybe the noise from the piece of foam slapping the surface was an issue. Certainly the solid indicators were more obvious and foreign looking as they floated overhead. Yarn indicators solved both problems. They were silent when they hit the water, and from my perspective looking from the bottom up, the yarn seemed to blend in more naturally with the dispersed bubble patterns on the surface. It looked organic, not man-made. We switched colors of the yarn indicators, and none seemed to spook fish or stop them from taking the flies.

Lesson 8: Weight is Pivotal

Weight is an enormous part of the equation in nymph fishing, especially when you are "prospecting" by fishing attractor-type patterns like Prince nymphs and Copper Johns. If a substantial hatch is happening, or a prolific number of bugs are washing through a run, trout will key on those insects and make more effort to eat. When fish are just hanging out in the water column, however, and merely feeding on opportunity, you have to hit them in the head.

I saw the fish bob and weave left and right, a few inches at a time, picking off nymphs but flatly ignoring bugs that floated overhead. One time, though, we had the weight just right: Two flies floated by a trout on either side of its mouth, the tippet "flossed" it, and the current pulled the trailer fly (and stuck it) right in the corner of the fish's mouth.

In another instance, we use the remote video to monitor a group of massive (20-plus-inch) brown trout feeding in a pool below a waterfall. Because the fish were feeding on the upwelling current, they were literally suspended in the water at a 45-degree angle, noses down. We over-weighed the tippet to "smart bomb" the flies straight to the bottom, then lifted them gently toward the surface. One of those big browns hammered a Barr emerger as it fluttered upward.

Here's the point: You should change your weight three times before you change your fly pattern.

Lesson 9: Trout Love Change

Places where you find changes in structure, changes in depth, and changes in currents are where you'll find most of the fish. We found trout to be less spooked in the more pronounced feeding lanes, for example, where a rock made a hard current seam and there was protective cover close by. I was able to approach fish in these situations much more easily than I could those that were exposed in open riffles and pools. You'll do yourself a favor by zeroing in on spots in the river where you see pronounced changes in current and the bottom.

Lesson 10: Drift Matters Most

Ask a trout guide "What are they eating?" and he or she will likely answer, "A good drift." If your flies are dragging, the trout will not only refuse them but will often swim away. We watched over and over via the video camera as we floated a large nymph through a series of pools and riffles. On purpose, we alternated ad drifts (in which the fly looked like a dog pulling on its leash) with good drifts (in which the
fly floated naturally). We could not have choreographed a more graphic response: The trout shunned and swam away from the dragging fly and, conversely, slid over to check out the smooth presentations. Your cast is about one-tenth as important as your drift. Learn to mend your line and control your drift, and half the battle is won.

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