

# In-Fisherman

Deep Salmon Breakthrough

## DEPTH IS NO BARRIER FOR KINGS

BY MATT STRAW WITH MARK CHMURA

Captain Mark Chmura tells the first mate to “send one downtown.” When the cannonball hits 400 feet, it’s not there yet. When this crew sends a bait “downtown,” people speaking Chinese pick it up on sonar. Chmura, the salmon-pro, angling-theorist, Renaissance man who came up with the Stability Zone, which we chronicled in our June 2007 issue, would like to announce that king salmon are biting, right now, in depths exceeding 500 feet all over the Great Lakes.



Recent findings by scientists working for the U.S. Geological Survey back this up, meaning king salmon go deeper than anyone previously believed, deeper than common lake trout, and on a regular basis. Roger Bergstedt, research fishery biologist for the U.S.G.S., says he implanted recording devices called “depth tags” in chinook salmon and released the fish into Lake Huron. “The data chip records depth, temperature, and time,” he says. “I’ve got over 30 tag returns from anglers, and these tags tell us there are more deep movements of kings than people think.

“Kings make a lot of vertical movements. They’re not hanging in there at 54°F all day. Any day. Movements to deep water are common and I’ve got to believe they’re down there on business. They’re hunting, and if you put a lure in front of them they’re probably going to take it.” Bergstedt says one of the tagged fish journeyed into the deepest water in Lake Huron, into depths exceeding 700 feet, during the night in winter. At daybreak the next morning, that salmon traveled from the bottom to the surface in a matter of minutes.

“One of the most interesting things we noticed in the preliminary analysis was that salmon were close together at night, and just after dawn they really spread out,” Bergstedt says. “Some actually went deeper at dawn, some shallower. If we plotted maximum depth by hour during late summer, they’re tightly grouped during the night at 55 to 60 feet. Once the sun came up, some fish went deeper than 400 feet. In winter, the deepest one we marked was within a meter or so of the deepest point in Lake Huron, or a little over 700 feet. In winter, the chinooks we tagged were 400 feet down at night, but they would come right up to the surface in the morning. They would be up there very briefly and head right back down to bottom. Tagged salmon were making daily vertical movements of 400 to 600 feet in a matter of minutes, sometimes once every hour or so. These were larger specimens, too. It seems smaller salmon are drawn to warmer water much of the time, but in winter they all head deep.”

Like a scattering of lost pieces from a jigsaw puzzle, these findings fit snugly into the overall picture of salmon movements in Chmura's mind. But just because he knew they were there didn't mean it would be easy catching them.

## The Final Frontier

"This is bigger than telling people we can catch salmon 500 feet deep," Chmura says. "The real news is that we're on the right track with respect to understanding salmon behavior in the Great Lakes. From an angler's point of view, this could be the biggest change in perspective in salmon trolling history."

About four years ago, Chmura and his crew were fishing on The Shelf, a startling piece of structure well offshore on the Michigan side. "We were marking fish deeper than we were fishing," Chmura says. "So I dropped a rig down 200 feet, and we caught fish. I kept going deeper every time out, wondering, what's the lower limit of all this? After four years, we've learned there is no limit. I feel certain that salmon are using the bottom of Lake Michigan, in 900 feet of water. I haven't been down that deep yet, but I know salmon are down there because I'm fishing down to 470 feet, catching fish and still marking salmon deeper."



The effort to probe deeper than 400 feet with conventional gear proved difficult. The benthic depths are guarded by powerful, twisting currents. These produce a barrier of sorts—a troller's nightmare, replete with tangled cannonballs and snapping wire. "If you put two downrigger balls down past 150 feet, they find each other and tangle in the deep currents of the Great Lakes," Chmura says. "The only way to create a spread of lures is to think laterally. Any additional rigs need to get down at a different angle. I'm getting a second line down there with wire on ocean reels like the Daiwa Dendoh-style Tanacom Bull. The Bull holds 700 yards of 30-pound mono, or 1,100 yards of 60-pound braid. It's one of very few reels that function at these depths. I spool it up with 30-pound-test Malin wire from Howie's Tackle.

"Three years ago I approached Rick Laroche and John Williams of Big Jon Sports to see about getting a downrigger with a stronger motor, one with the capacity to lift 24 pounds. I needed a smaller diameter spool for better torque, too. They provided me with a spool that holds 750 feet of cable and they're designing one now that holds 1,000 feet. They've been very helpful in all this, but that's just the beginning. Fishing this deep requires specialized equipment, and even when you obtain that equipment, you're forced to fish a thin spread.

“We have to baby these rigs. Dropping and lifting 24 pounds through a liquid medium creates a tremendous amount of stress on equipment. If the cable nicks, you have to trim it back. And, until now, I haven’t been able to read temperature down there. Remote units won’t transmit that far. But Depth Raider is making a down-temp unit I’m putting on my downriggers with 1,000 feet of cable.

“For the past four years, I’ve been catching 6 or 7 additional kings each day, fishing deeper than 300 feet with only one line. Whatever works up on top of The Shelf in the morning is what I drop down deep in the afternoon. You have to feel for the bottom. If you’re not near bottom, you’re not going to catch kings. I stop catching lakera at about 250 feet. I’m not bringing up any juvenile kings from 300 feet, either. The only fish that deep, in Lake Michigan, are big kings. At about 9 to 10 a.m., it’s typical for that shallow bite to shut down. I head out into deeper water at that point.”

All of this begs questions nobody can yet answer. Like, what are they eating at that depth? We can’t trust stomach content, because kings may have been 400 feet higher in the water column mere minutes before being hooked downtown.



Dr. Jeff Schaeffer of the U.S.G.S. says alewives and other baitfish have declined severely in shallow-water habitat throughout Lake Huron and Lake Michigan. “Salmon could be going deep because that’s where the most prey exists,” he says. “The prey I suspected was the bloater chub, but we don’t find them any deeper than 350 feet. We don’t have much data from deeper than that. We know sculpins can persist down to 150 meters (492 feet), so they’re probably found in the deepest areas of the lake. On Lake Superior, during the course of deep exploration with a submarine, fish of various species were found at the deepest points of exploration, over 1,000 feet down.”

Sculpins, like gobies, have no swim bladders and cannot suspend off bottom, which could be the reason Chmura always finds deep, active salmon pinned to structure. And Chmura’s 10 a.m. schedule plugs nicely into Bergstedt’s data, which revealed that summer salmon were grouped tightest during the low-light periods of morning and evening, usually somewhere between depths of 45 and 90 feet. At daybreak every day, some of those fish went deep, but some moved even shallower. During the day, tagged salmon moved up and down like yo-yos, and were scattered widely from 50 to 500 feet at any given moment.

“I just changed from 500 feet of cable to 750 feet on my Big Jon downriggers,” Chmura says. “Some spools hold 2,000 feet. This year, I’m going down until I find their maximum depth range. I think kings are using the deepest water, depths of 900 feet and greater, in Lake Michigan. At any rate, adult salmon are biting near bottom as deep as I can troll. And I wouldn’t know where to troll without the split-screen zoom function on my sonar. Without it, you’re not going to see these fish. I’m using Si-Tex sonar right now, but I’m thinking of switching to Ray Marine. The Ray Marine E-Series includes a model that has GPS in 3D that shows you nooks and crannies at those depths. I set the zoom at 10 feet above bottom, making it far easier to locate fish

when you're talking about sounding through 500 feet of water column. Trying to locate and zero in on suspended fish at 500 feet is like targeting mosquitoes with a slingshot. Using a 24-pound downrigger ball near bottom, I caught kings as deep as 436 feet, which was my maximum operating range last year. This year, I'm goin' way downtown, but staying on structure.

"My Si-Tex graph, with the zoom showing the bottom 10 feet, always shows activity, every month of the year. I thought they were whitefish and lake trout at first, but the majority of those fish are kings. How many times have you had people say their depthfinders suddenly lit up with fish? When I hear salmon fishermen say it, I believe those fish suddenly rose from the depths."

### **The Davy Jones Program**

"When currents are strongest, you can only go one way," Chmura says. "You can't get a ball downtown plowing into the current. If the wind is coming out of the north for days, it creates a cold current, and salmon rise up on top of The Shelf, or any similar structures, in depths of 60 to 100 feet. That's the highway, where the average guy spends most of his time and where I like to spend the least possible time. If that current's coming out of the south, it's a warm current and more salmon seem to be deep more of the time.

"I'm using 120-pound-test cable. I'd like to go thinner, but I'll lose too much gear. If I go thicker, I get too much resistance. But resistance is what's telling me which way to go. Watch the cable angle. Keep it as straight as possible. When it's pointing out, behind the boat, it's time to turn around. You're going with the bulk of the currents when you're trolling with the least resistance. Those deep currents drag your rig way out there if you're trolling into them. It takes time, unless you're out there a lot. And to keep a cannonball down over 400 feet, you're restricted to about 2 mph. Any faster and the rig rises out of the zone.

"Zebra mussels persist way down there," Chmura says. "That means you can't drag bottom. To stay in the zone, I touch bottom three times. Touch bottom once, troll 50 feet or so, drop it to bottom again, repeat the process once more, and the rig stays within 10 feet of bottom. Again, with that much cable out, the angle of the cable tells you which direction you need to be trolling. Once you've determined that, just keep going. Don't troll back to point A. Circle back.

"My presentation consists of using the center rigger to send one cannonball down 450 feet. In addition to special downriggers, you need to use red Off-Shore releases. The black ones release at 180 feet. A second lure can be sent down with the Dendoh-style Tanacom Bull from Daiwa, which holds 3,800 feet of Malin multi-strand wire. Using 2- to 4-pound balls on wire line, looking for a 2:1 ratio, is the only other way to go deep. Using a 4-pound ball, you might be able to get down 500 feet with 1000 feet of wire out, depending on the currents. Last year, I could only put my center rigger down, but that one bait accounted for a dozen or more kings some days at depths between 350 and 440 feet.

"Before going downtown, hook up a glow J-Plug, a glow spoon, or a glow flasher and charge it with a camera flash. The key is simply using whatever was working on top in the morning, with the added attraction of phosphorescence.

"The Stinger Nitro is one of my favorite glow spoons," Chmura adds. "The Nitro glows for 6 hours on a single charge from a camera flash. I use the Mag and the Sting Ray, the two largest sizes. Increased surface area means more glow. We assume it's rather dark at such depths. I've pulled dodgers and flies and dodgers with meat down there, too. Those fish are coming up to feed, but the lure has to be close enough to see in the dark. Glow versions of the Stinger Nitro and the standard size #4 Luhr Jensen J-Plug have been my best baits downtown.

"I start out on top of The Shelf in an area I call the Firecracker. It consists of two shelves, the first dropping from 50 to about 160 feet. Three miles out, another shelf drops all the way from 350 to 700 feet, then gradually tapers to 900. Fish are on bottom in all these depths all year. It's very consistent.

"I tell my first mate we're going downtown. He knows that means 350 feet or deeper. At those depths, scales come off easy on the fish we bring up, but they're beautiful and in great shape otherwise. If you don't force them up, I think they're releasable, though very few kings are released in this business because, as a rule, they're not releasable. Salmon are worn out, partially drowned, can't be revived from a moving boat, and seldom go back down. When you're fishing deep, you can stop the boat. You only have one other line to haul in, if that. If you baby these salmon up, they're releasable."

Salmon can dump air, relieving pressure on their swim bladder as they rise, just like lake trout, meaning there is no reason not to accept Chmura's premise. Bergstedt captured all of his kings for the study by trolling and, obviously, kings can be released and live out the rest of their lives, even after surgery, with a tiny computer tucked snugly in their abdominal cavity.

"On top of these breaks from 300 to 700 feet, steelhead often persist because of currents that run just under the surface," Chmura points out. "I think those steelhead are in the top 20 feet in the same areas where salmon are 400 feet down. I think they generally merge as they approach shore together in fall, because we start catching them at the same time with the same program in the same areas every fall. They merge when the temp on top begins to equalize with the middle of the water column, and I think both species are in heaven in 49°F water."

But that's a different program. And the "downtown" program might be a tad difficult to swallow, which is okay. Centuries passed before Europeans could admit the world is round. Most of them were, however, illiterate, giving rise to the term "Dark Ages." Obviously, you can read, so don't try to think like a salmon. Unless you have a brain the size of a pea, it will hurt. And trying to "think like a fish" obviously didn't help any of the millions of salmon fishermen out there realize how deep salmon are willing to go. We all need to completely reevaluate everything we think we know from time to time. Salmon fishermen don't deserve any free passes in that regard.