



Brook

Labrador *Last*

By Tom Boyd

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Trout of the Giants

Ray Best has guided forever for Cooper's Minipi Lodges in Labrador, Canada. On a special day 20 odd years ago, we fished Petch's Pond. We were anchored off in about 6' of water 50' off a small island. The peat-stained waters were swathed with a thousand green drakes. Surface water temperatures had reached 60° F - the hatch was on - not just any hatch, but one of the most mind-boggling insect hatches anywhere. The green drakes were #0s and 2s - like small birds. Oblivious to our presence, giant brook trout cruised the shallows, gorging. I was prepared with some wonderfully tied drake patterns in sizes to #4, but in no way could I match this hatch. Ray pointed at a #4 Ausable deer hair Wulff. Tying it on, I cast it about 40' towards the island and it landed softly among the huge drakes. It looked like a damned sea gull!

"That's a Nipigon trout." Incredibly, the giant targeted my fly from among the multitude and opened its huge maw to suck it in. Unbelievably, I lifted my rod tip and pulled the fly right out of the behemoth's mouth. Ray looked at me like I was dog feces. "What the hell?" Quickly I cast again. The giant brookie swiftly turned and swam right next to my fly on the surface. My 6 lb tippet went up one side of his dorsal fin and down the other. Hastily he turned and ate my fly again - or almost did. Again, inexplicably, I yanked the fly out of his mouth a second time with Ray saying something I can't repeat in print. An "inferior" 7.75

pounder ate my fly while I was trying to explain to Ray how I'd become brain dead. I brought in the 7.75 pounder, dwarfed in comparison to the monster I had missed. All these years later, I still vividly remember totally losing my composure, the only time ever in fresh water. I was a professional fly fisherman, but totally unnerved by the size of this giant brookie. Ray, very angry, and shaking his head in disgust, would only say, "Double digits" when I asked how big it was. I strongly feel it was 15 pounds. Up to that point, my biggest Minipi brookie was 9 lb 2 oz I called him Clark Gable as he was such a spectacular fish, in full spawning regalia.

Fast forward a few decades to 2015. My guide is the same, Ray Best, starting to get a little long in the tooth and now spectacled but my brain dead episode now only a vague memory. The Minipi giants were still here! My first two days in camp demonstrated that. The fishing was great, but I'd missed two world record line class, double digit brookies – one severed my 12 lb tippet when he crushed my 5" lemming pattern.

Today, Ray and I fished the "Penalty Box" hole at the outlet of the Minipi River on Minipi Lake. My big lemming pattern failed a few casts and Ray offered, "They've seen it before and didn't get that big being stupid." I tied on a sculpin pattern that I'd taken an IGFA record brookie on years ago. It was crushed on the first cast. After an incredible 18 minute fight – the first half of which was on top - I finally landed a 9 lb. 10 oz. male. He was only 25 5/8" long but had an amazing 17 3/8" girth. The sculpin pattern was the same one used by Dr. W. J. Cook for his 14.5 lb Nipigon River brookie in July 1915. This is one of the longest standing IGFA world records. Some theorize this fish was a hybrid splake – a cross between a brook trout and larger, longer-lived lake trout. Others speculate it was a "coaster". Coasters are a potamodromous morph of brook trout that are very large and live much of their lives in the nearshore shallows of the upper Great Lakes, particularly Lake Superior. Severe pressure from anglers, accompanied with little or no regulations, decimated the coaster population in the mid-1880s. Cook's trout was not officially weighed for three weeks after being caught as the doctor carried the great fish through demanding terrain before encountering civilization - and a scale. The trout was badly decomposed and had lost several pounds. Efforts are now underway to restore this brookie morph.

Cooper's Minipi Lodges are arguable the last stronghold of giant brook trout that commonly are taken on dry flies. In 1957 legendary angler Lee Wulff discovered the Minipi Basin. His words: "Back in the mid-1950s, when I was flying the only light plane in eastern Labrador, I used to look down on unbroken wilderness for mile after mile. For me, exploring these unknown waters was a major project - a labor of love. I searched, I fished, I recorded – and I enjoyed. Of brook trout I found more than my share, only to see some of the best waters later ruined by over-fishing. Then I struck the most fabulous area of all!" Through all of my exploring, one chain of lakes showed up better for brook trout than all the others. My light rod bowed to the pull of brookies averaging five pounds. I vowed to keep this spot secret until a time when its treasures could be shared without destroying it. Fast flows tumbled between the shallow lakes where, from the air, the rich





underwater grass beds showed up in wide areas like submerged golden carpets. I pictured the grass heavy with nymphs. In June the green drakes would rise in clouds to the freedom of the air.”

Lee got his wish and today this great wilderness remains as pristine as when he discovered it as “the labor of love” of the Cooper family that has expanded to include Robin and Chili. Recently, I analyzed many years of catch and release records for various Minipi Lodges over decades and found the statistics very similar to when Lee Wulff discovered it. The average fish is 5.5 lb early in the season, slightly larger than the “slightly over 5 lb” stated by Wulff. The fish increase in average by about a quarter or half a pound or more over the course of the season. The Minipi catch record numbers were down slightly but totally retained the initial pristine integrity of the ecosystem Wulff discovered.

When discussing the world’s greatest brook trout fisheries, names like Rangeley, Mistassini, Assinica - Broadback, Nipigon, and

Minipi are consistently in the forefront of the conversation. Huge brookies to well over 10 lb were taken from all of these great waters. Of them all, only the Minipi remains unchanged.

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Its remoteness and the Coopers’ administration of Wulff’s conservation practices of catch and release, fly fishing only, barbless hooks, etc., have frozen in time the quality of the habitat and its remarkable fishing. To varying degrees, all of the other great trout areas were subjected to man’s interference. The great Rangeley trout are extinct – a few genetically

similar fish remain in Chilean Patagonia. The other areas were reduced by hydroelectric dams, deforestation, mining practices, tourism, increased access, fishing pressure, no catch and release policies, elimination of forage species, introduction of non-native species, pollution, increase of water temperatures, construction, inferior regulations, etc. Some of these areas still produce record size fish on occasion and in several of these areas, new treaties with aboriginal people provide hope.

In the 1980s and 1990s I traveled extensively to the Minipi to fish, do research, and explore. For 38 years Jack and Lorraine Cooper have protected this great fishery and used all their resources to aid those who sought to protect, while figuring out the magic of this vast unique ecosystem. I participated in some of this work with the aid of the Coopers, Drs. Richard Haedrich and Laurie Thompson, David Larsen and graduate students from the Memorial University of Newfoundland who helped with tagging, DNA samples, population estimates, diet

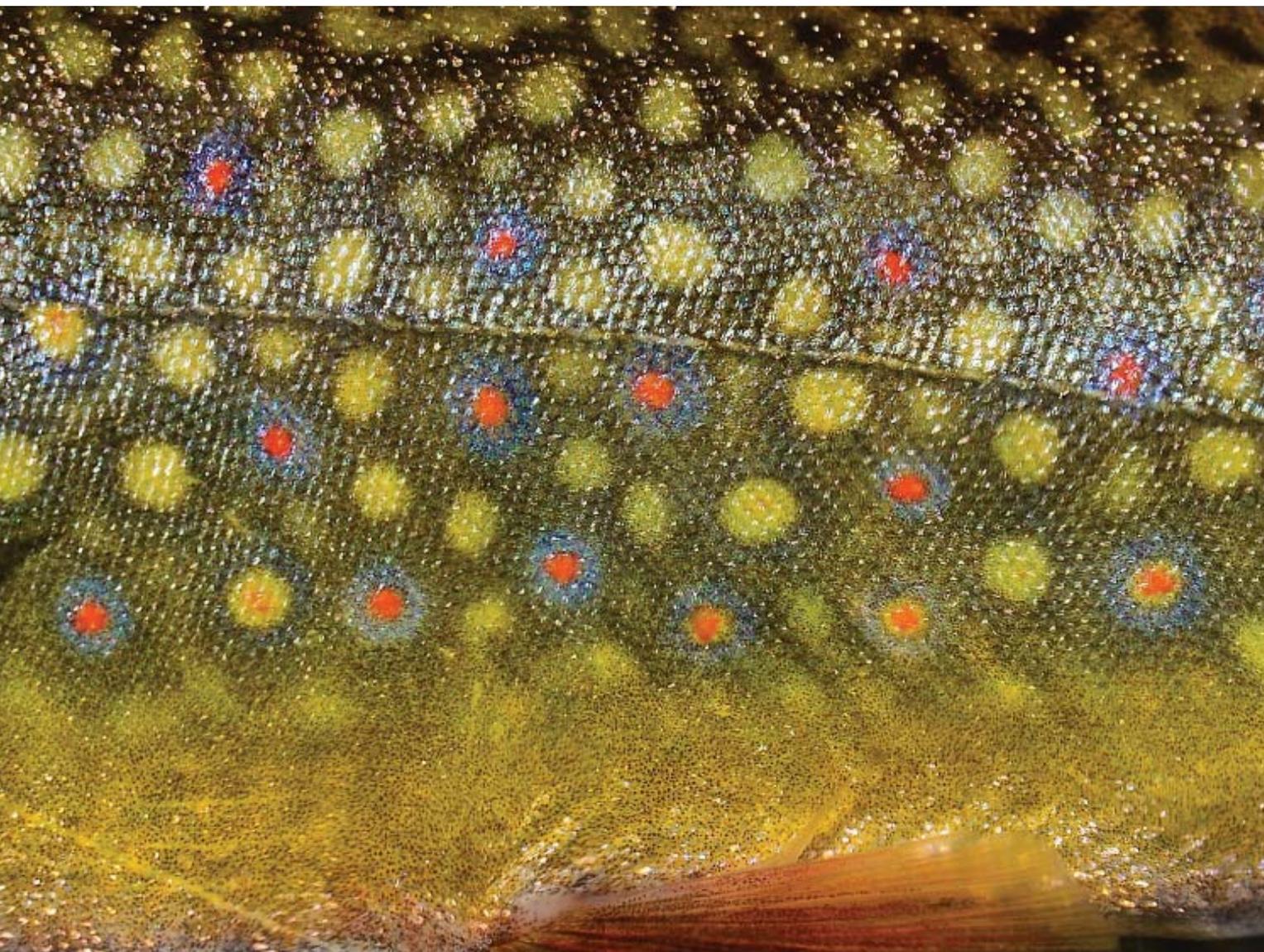
analysis – especially over the harsh winters and entomology, spawning areas, age of fish and number of spawns, brook trout/northern pike predation, distances traveled for feeding, nursery areas, and whether they were truly landlocked, temperature and depth studies, and hybridization with landlocked Arctic char. I communicated with noted DNA scientist Dr. Robert J. Behnke of Colorado State University, now deceased, in 2014 to determine whether the Minipi trout were a unique morph.

Some of our findings were incredible and shed an entire spectrum of new knowledge on one of America's most beloved species. Many of the discoveries relating to the Minipi are truly exciting revelations. However, it is also sad as it brings attention to the other great brook trout fisheries which were adversely impacted and even destroyed, like the extinct Aurora, Silver Trout, and Rangeley morph, before we could discover what made them unique. The brook trout is endemic to the northeastern part of the North American continent. It was Colonial America's favorite fish and greatly sought after for its gameness, beauty, acceptance of dry flies and a welcome addition to the table fare. Today it has been displaced by rainbows and browns throughout much of its natural range and much of its habitat compromised. However, it has been introduced into many cold, clear habitats throughout Canada and the US West. It is hoped that the following revelations will lead to a renewed investigative interest in brook trout specifically and our fisheries and their habitat in general. The following data is my interpretation of all of my individual studies and input from many others.

Age Studies

In the US most brookies live two or three years. In Dr. William A. Flick's study of Canada's great brook trout fisheries, he studied trout to age seven in Quebec's noted fisheries in Lakes Assinica (Broadback River), Mistassini, Albanel (Temiscamie River) from 1962 – 1974 and published results in 1977. Flick found brookies to eight or nine years old in Minipi's Lake Anne Marie. Ann Marie's outlet is where Lee Wulff originally landed in 1957 - he called it Lake White and it has since been renamed. Drs. Haedrich, Thompson and I also determined the age of brookies





at eight and nine in the early 1990s. We counted the clearly recognizable annulus rings on the scales to ascertain age – much like counting the rings on a tree. I later found a 9 lb 2 oz brookie with 10 annuli rings in The Little Minipi River. The Coopers’ guides have continued tagging programs over the years. On my 2015 trip I reviewed their tagging records and was astonished to find trout tagged in 1998 and 1999 as four and five year olds were recaptured in 2014 and 2015. This makes them 20 years old and counting! This is far and away, by more than double, any credibly reported longevity of the species

Unique Species

Dr. Robert Behnke related to me that there were three different ecological brook trout morphs: A lake form in the northern parts of its range; sea runs, also called salters, that spend time in the brackish water and near-shore salt water to feed and a small, short-lived variety that occurs in small lakes and streams. Each of the species has developed sub-species.

With the information I presented him, Behnke speculated the Minipi giants were a unique species that had evolved and adapted to its habitat since the retreat of the last glacial epoch in the Minipi Basin approximately 7 or 8,000 years ago. My problem was raising the funding to certify this hypothesis. It is assuredly less expensive today and worth another look. Behnke also offered that char species were the most adaptable of all the trout and salmon species and formed the most morphs.

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Hybridization

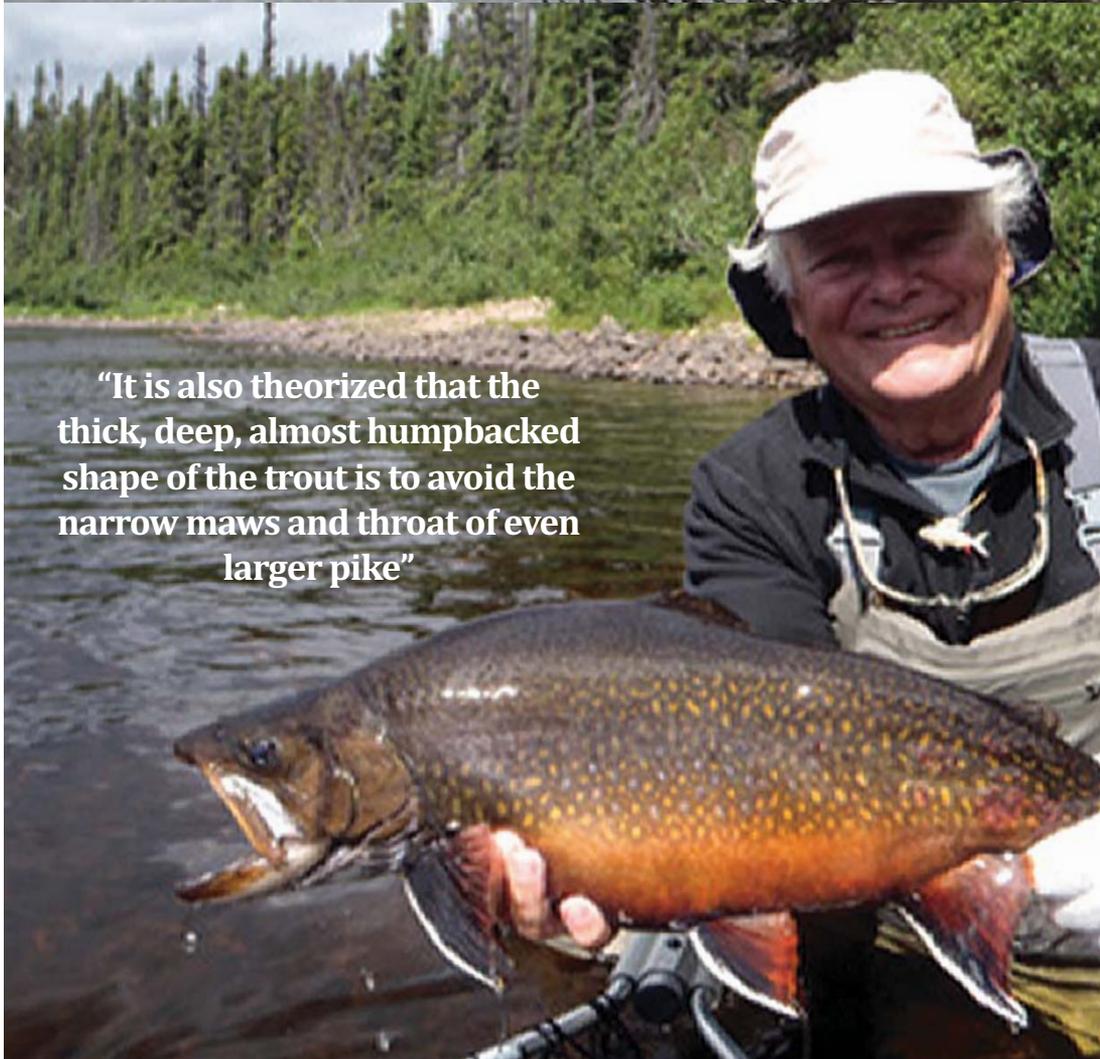
According to my observations that are backed up by Minipi guides and Dr. Behnke, hybridization between brook trout and landlocked char is rare, but does occur. Both species are char and closely related. The brookies and landlocked Arctic char are joined by bull trout, anadromous Arctic char, Dolly Varden, Lake trout and anadromous Arctic char as a subgroup of the salmon family and are distinct from trout.

Predator Relationship

Almost none of the fish in the Minipi trophy areas are 2.5 lbs. or smaller. There are numerous streams that have abundant small brookies from several ounces to a pound or two. Possibly, they may be a different species from the giants, but probably they are the same, and remain in smaller waters as a survival behavior until large enough to risk the dangers of the big water from northern pike predation and strong enough to survive the strenuous efforts involved in traveling great distances to obtain sustenance. It is also theorized that the thick, deep, almost humpbacked shape of the trout is to avoid the narrow maws and throat of even larger pike. A Scandinavian study in a closed system with brook trout and northern pike the only two species presents some scientific data to support this hypothesis.

Spawn

The harsh winter conditions of the Minipi may have greatly impacted brook trout spawning practices. The Minipi Basin water levels there vary greatly. A great, gravelly spot one year may be high and dry the next. We discovered spawning checks, gaps, in the scale annuli of the trout, indicating some of the fish did not spawn every year. In the northern extremities of their range Arctic char routinely spawn every two or three years. Char need this time to recover from the vigors of the spawn. Char are generally much longer lived than brook trout, up to about 40 years, but maybe not so much in the Minipi. This is an area that needs much more research. There are only a few trout spawning areas in the Minipi Basin, with "Lover Boy Run" probably the most famous, but "Boyd's Hole" is



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becoming recognized more and more as a trout and char spawning aggregation area. At the time of the spawn, late August and September, the trout are particularly vulnerable. They're definitely off their feed but basically oblivious to anything but the spawn. They can often be easily approached and netted.

Size

It is traditionally thought trout and char grow throughout their life span. The Minipi tagging records may cast doubt on that hypothesis. Several of the 20 year-old trout were in the 6.5 pound range and arguably in decline. Trout to over 11 lbs. have been taken in the Minipi System. As previously described, I saw one estimated to be 15 lbs. in Petch's Pond while fishing with Ray Best. I saw, and lost, two fish larger than the IGFA line class record 9 lb. 10 oz. trout taken in 2015. Most of the early IGFA record fly rod brook trout were taken from Mistassini waters until the 1960s when Minipi waters started to be fished. It should be noted that most the Minipi Basin's vast watershed remains unexplored and unfished. Some of the extremely remote areas may now be accessed with Minipi's addition of a Beaver float plane and regular fly outs. For example in July 1994 my son

Tom, Minipi guide Michael White, and I explored the Emily River above Johnny Lake. My first cast produced an IGFA world record.

Diet

Flick's report of 1977 stated: "None of the stomachs examined in Lake Ann Marie specimens contained fish. A variety of insects were eaten and Odonata, Diptera and Coleoptera (mainly terrestrial) dominated." Flick continues, "The food supply that produces rapid growth and large size in these northerly trout populations remains obscure.....but it would be necessary to produce the size fish involved." "The fine mesh gill net (Flick) used in Lake Anne Marie to reveal any fish species in sufficient abundance to be considered important as brook trout forage."

All this has dramatically changed! Most importantly, Dr. Haedrich brought along a fish shocking unit as part of our research equipment. We had a hell of a time getting it to work due to the extremely low TDS (Total Dissolved Solids) levels of the pure Minipi waters. Water doesn't conduct electricity; it is the impurities in it that do – i.e. your bathtub. We had to use the unit's maximum current setting. We found what has eluded scientists for generations. In the streams there was a high con-

centration of Lake Chubs (*Couesius plumbeus*). Lake Chubs occur in large numbers in the cold streams, riffles, and lakes of the Minipi Basin. They are tiny carnivores that spawn in the summer months and feed on insect larvae and fish eggs, including brook trout. They seek the depths of the larger, deeper lakes to protect themselves from the savage Labrador winters. They are the species that Flick and others have sought, the primary explanation of how the brook trout and landlocked Arctic char are able to emerge from under the heavy ice, fat and sassy. There were also burbot present and some small pike, but further research points to the 3-6" Lake Chub as the dominant forage species. I have taken many brookies on Chub patterns fished deep. Additionally, at least in some years, there's an abundance of lemmings, mice, and/or voles. I caught a big male with an extended stomach which when pumped with a suction pump tube yielded 5 partially decomposed lemmings or lemming-like creatures. A Minipi guide told me of one distended trout contained 9 lemmings. These abundant food sources, in addition to the copious aquatic insect larvae available over winter and the profuse hatches of summer, provide nutrition for massive growth rates.

Landlocked

Some theorized that the great size of the Minipi trout and char was due to their access to the sea. On older Canadian topo maps a connecting stream is shown at the eastern extremity of Big Hairy Lake providing an outlet to the Kenamu River that feeds the Churchill River and access to the Atlantic through Melville Sound. That connecting river doesn't exist. I flew over in a helicopter and inspected on foot and couldn't find any evidence of it ever existing. These are definitely landlocked species.

Population

Dr. Haedrich did some rudimentary population measurements and we estimated a total population of 2,500 of these unique giant trout in the entire watershed, less than the Little Minipi which was added at a later date. Several of the guides scoffed at such a low population estimate, but when accompanying me with my portable fish finder, expressed doubt that it worked properly. So I deployed a second and apparently "it didn't work right either". These giant brookies have no "Einsteinian" genes in them and are aggressive feeders in the short summer season, therefore extremely vulnerable





Temperature

I used depth finders and weighted temperature gauges to determine favorable brookie habitat and preferred temperatures. Brookies are fairly tolerant of high temperatures to the mid-70° F. They will die at temperatures above 80 or 81° F. In hot summer months and over winter they seek preferred thermal climate zones in the 53 – 55° F range. I've never detected them below 37° F. Thus, where they hold has to be well oxygenated and fairly deep. The bottoms of most of the larger Minipi lakes were intriguing, and clearly revealed violent upheavals and possible tectonic plate action. Depths in the hundreds of feet were common in the apparent sandy shallows of The Hatchery. The deepest, with a huge, almost circular, steep but smooth-sided marine vortex depression, was over 700 feet deep. All the lakes were well oxygenated with moving water coming in and out.

Distance Traveled

Utilizing fin clips, our research group evidenced trout and landlocked char moving up to four miles in a 24 hour period to access a new hatch or other food source. Our finding was reinforced by Flick's study, where four of his tagged fish were recovered and had traveled 10 km.

Conclusion

Both Flick's and the Coopers' tagging data reveal even light angling pressure can adversely affect the brook trout population. Cooper's tagging data indicated trout being caught, tagged, and re-caught within a few hours. Once I caught and then re-caught a 6.5 lb. brookie from remote Minipi's Johnny Lake after a 15 minute interval. The Coopers have addressed this concern by adding new waters (Little Minipi) to their already vast watershed and restricting the use of their Lodge at Minonipi and closing Johnny Lake. They now mainly fish out of their two newest, most luxurious lodges and take fly-outs or camp-outs to other areas. Rotating angling pressure and other strategies minimize angling pressure.

Even today there are major gaps in our knowledge of these giant trout. This ecosystem is unique to our planet. The Minipi is the last surviving intact giant brook trout, landlocked Arctic char stronghold. Thank God it is still in the caring, competent hands of the Cooper family. — 

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Tom Boyd is a professional catch and release fly fisherman in fresh and salt water. For 50 years he has been an active advocate in studying fish behavior and developing techniques to catch even the toughest gamefish. Tom is *Fly Fish America's* Editor-at-Large. His *Saltwater's Greatest Gamefish – Techniques and Tactics to Catch the Top 35 Species* was published by Stackpole Books in July 2015.