COASTER BROOK TROUT

They've survived in spite of us.

By Ted Williams

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They were called "coasters" because they cruised the coasts of earth's largest unsalted seas. Like their cousins, the lake trout, some hatched on reefs, but probably in protected bays over upwelling groundwater. Others began life inland, embraced by clean gravel in pools cut by cedar sweeps and cooled by ancient forests of pine and spruce. They fattened on insects that billowed up from stream and lake beds and rained down from grass and brush, then they drifted off into the rich nearshore waters of Lake Superior, Lake Huron and upper Lake Michigan.

Where the Supremes had cracked a window, the Bush administration broke down the side of the house. "They've been very sly here," declares Julie Sibbing, wetlands policy specialist for the National Wildlife Federation. "They've skewed what the courts have been saying. In fact, their own Justice Department disagrees with them. Justice has done an outstanding job of arguing this issue, appealing the three cases that have clearly found for a broader interpretation [i.e., the interpretation promoted by the White House]. Twelve cases have found for the narrower interpretation, and Justice is vigorously defending the ones that are being appealed by developers." The guidance was not written by any of Justice's practicing attorneys but by Jeff Clark, an acolyte of US Attorney General John Ashcroft.

But even then coasters were on their way out, victims of unregulated fishing and the first wave of timber barons who razed the lake states of pumpkin pine, thereby degrading trout water with silt and sun. As early as 1879 A. N. Winchell published the following lament in The Geological and Natural History Survey of Minnesota: "The brook trout is an object of wanton destruction in northeastern Minnesota One stream after another is visited. A camp is pitched beside each where it empties into the lake. Then for several days, perhaps a week, the river banks are lined with the creeping, stealthy forms of the fishermen throwing every temptation the ingenuity of man can devise before the eyes of the wary trout. By diligently and patiently continuing at their posts through every hour from daylight until evening, it is surprising if any fish are spared in the stream."

Writing in the September 1889 Scribner's, coaster enthusiast A.R. Macdonough warned that "Unless it is cherished the glory of the Nepigon [sic] may fade, and the story of its marvellous attractions may become a tradition of the past."

Coasters brought people to the upper lakes, pumping money into towns like Ashland, Wisconsin. A Chicago businessman could take the train north on Friday, check into the posh Chequamegon Hotel, catch (and, of course, kill) 100 coasters over four pounds, and be back at work on Monday morning.

Coaster restoration has been attempted off and on for the past century, mostly with dismal results. But suddenly it looks as if it's going to work, at least in Lake Superior—the biggest char habitat on earth. In the 1990s managers, pushed and funded by Chippewa Indians, Trout Unlimited and other citizen activists, started working with known coaster stock, planting eggs and fry in tributaries. Previously, they'd just dumped unimprinted adults. In December 1999 a coaster restoration plan was hatched by the Lake Superior Committee, comprised of representatives from the Ontario Ministry of Natural Resources, the Chippewa-Ottawa Treaty Fisheries Management Authority, the Great Lakes Indian Fish and Wildlife Commission, the Michigan Dept. of Natural Resources, the Minnesota DNR and the Wisconsin DNR.

When Rob Swainson, of the Ontario Ministry of Natural Resources, got to the Nipigon District in 1988 he had management responsibility for 11,000 lakes, including the Nipigon River's source, Lake Nipigon (60 miles long and 40 miles wide). In addition to looking after these resources, he was asked to do caribou, moose and eagle surveys. Such was the priority attached by the province to its coasters.

Immediately Swainson asked to see the coaster data. There weren't any. In fact, according to his colleagues, there weren't any coasters, at least none to speak of. "I was shocked," he says. "Our department had been working on walleyes - walleyes this and walleyes that. We'd written off coasters." But when Swainson started interviewing local anglers he learned that a shadow coaster stock had somehow managed to hang on-through the construction of three dams on the Nipigon, through power generation that flooded and dewatered the river faster than the Bay of Fundy tide cycle, through raw paper waste, through a fillet-and-release management mindset that was still allowing a daily kill of five fish and didn't even impose a minimum size limit.

In Ontario it is a criminal offense to destroy brook trout habitat, but because the mangers assumed there were essentially no coasters left in the Nipigon they didn't complain when Ontario Power Generation alternately aired out and blew out redds, eggs, fry and invertebrate prey, often within the same day. When Ontario Power announced a drawdown ("usually at 3 am and 40 below," says Swainson) he'd rush to the exposed spawning area and find dead and living fry. Once he dug a trench to the river and chased about 500 stranded survivors to safety. Now the Ministry had some ammunition, and in 1989 Ontario Power avoided enforcement action by cutting a deal for trout-friendly flow regimes.

The same year, with help of anglers committed to native fish restoration and despite porcine squeals from the fish-as-food-oriented Ontario Federation of Anglers and Hunters (OFAH), Swainson got the Ministry to implement a limit for the Nipigon River of two fish a day over 18 inches, and to establish no-fishing zones at major spawning areas. In 1997, again over the noisy protestations of OFAH, he and his allies succeeded in closing winter fishing and reducing the daily limit to one fish over 20 inches. "No-kill is the ticket," he told me, "but I can't sell it." Even in the 21st Century people are eating coasters—especially in the tributaries to Lake Superior outside Nipigon Bay (where, inexplicably, the Ministry retains a kill limit of five a day) and in the rest of Ontario's portion of Lake Superior (where, inexplicably, the Ministry retains a kill limit of three a day).

Still, the fishing from the Nipigon River to Minnesota is better than it's been in half a century. One day last September my friend and fellow fish writer, Shawn Perich, caught 11, including a 24-incher--all by mistake, while steelheading in a little freestone stream he asked me not to name. "Nipigon's a mill town, not the kind of place you'd expect people to release fish," he says. "But they do because of Swainson. I've had people at the boat landing break away from a serious beer party to tell me to please release brook trout. That just blew my mind." Swainson has even given them T-shirts that say, "Turn off a light and save a Nipigon brook trout."

"The improvement is astonishing," declares Gord Ellis, an outdoor writer/photographer from Thunder Bay, who caught and released the handsome coaster that illustrates this piece. "It's not unusual to catch a 20-incher, and this is a river that the Trans-Canada highway goes over. When the Nipigon came back Lake Superior started to come back all down the north shore." Last year an 11-pounder was taken in Sturgeon Bay, Ontario; and Minnesota's Pigeon River, where coaster restoration by the Grand Portage Chippewas and the US Fish and Wildlife Service has been underway since 1991, yielded a new state record of six pounds, five ounces.

Ellis and other activists are helping Swainson tag fish. Provincial fish regulations don't apply to Indians, but gillnetter Gilbert Martin, of the Pays Plat band, tags and releases every coaster he catches, keeping immaculate records; and he rises at four in the morning so he can pull his nets before any die.

When Swainson was invited to the states by TU and the Fish and Wildlife Service to talk about his coaster program, he felt himself pulled in two directions. On the one hand, he wanted to encourage an aggressive, lakewide restoration effort with uniform, restrictive regulations. On the other hand, he didn't want a bunch of Americans descending on his fish. In 1997, when the one-fish-over-20-inches regulation went in, he starting

making his pitch. Everything he had heard from his colleagues in the Ministry in 1988 he heard again from managers in Minnesota and Wisconsin: "We don't have any habitat. We don't have any fish. We've stocked the lake for a hundred years with no success." When he asked them if they had ever bothered to look for coasters, they allowed they hadn't. Managers in Michigan appeared goosey—having been badly burned by a failed grayling restoration effort in the late 1980s—but they were not so negative.

Prodded by TU, Minnesota managers finally did look for coasters in the fall of 1997. With backpack electrofishing units they and volunteers from TU's Gitche Gumee Chapter sampled 289 brook trout from 22 streams. In October many of these fish had been in spawning condition, but by November they'd disappeared. And since the streams have barrier falls, the only logical conclusion was that they'd migrated back to the lake. Moreover, on several of the streams where ripe brook trout turned up, no fish had been found during routine summer surveys. The largest of these apparent coasters measured only 13.6 inches.

"My guess is there are coasters associated with virtually every stream on the Minnesota coast," says Perich. "We catch small, silvery brook trout while we're steelhead and salmon fishing." If Perich is right and if the troutlings surveyed by the Gitche Gumee Chapter and the Minnesota DNR are really young coasters, it could mean that these fish were traditionally picked off by anglers as soon as they grew to pan size. Maybe the modest resurgence of coasters in Minnesota has something to do with the daily limit of one fish over 20 inches and season closure on September 1 that the state imposed in 1997.

The most dramatic coaster success in Minnesota--in fact, in the United States—has been on the Grand Portage Chippewa reservation tucked up against Ontario where, for a decade, the band and the Fish and Wildlife Service have been planting three little streams with Nipigon stock. Instead of just dumping big fish, they've been releasing fry in the spring and burying eyed eggs over artificial upwellings in January. Adult fish are now running up from the lake. As an experiment the band didn't stock one of the streams for a year. The next year it was full of fry. The Indians love to fish for coasters and are very good about not killing them—better than non-Indians. "You're no one up there unless you have a four-pounder," says Lee Newman of the Fish and Wildlife Service.

The Chippewas are also leading the charge in Wisconsin, where the Red Cliff band has committed its hatchery entirely to the production of native fish—lake sturgeon, walleyes and coasters. And while it has yet to document natural reproduction on the two creeks it has been stocking, it produces about 1,000,000 coaster eggs a year, enough to supply the needs of the Grand Portage band and some of the restoration effort in Michigan. "This year we're kicking off a huge project to start restoring whole watersheds of several other streams in the reservation," comments the band's natural resources manager, Greg Fischer. "We're also looking at some of the smaller stream systems for whole-watershed approaches—managing flow and sediment load, working with state, feds, county, TU and individuals."

Two years ago the Fish and Wildlife Service dedicated the Whittlesey Creek National Wildlife Refuge, which will protect 1,800 acres of coastal wetlands and spring-fed trout habitat. Coaster restoration is a major refuge goal.

Good things are happening in Michigan, too. There are reliable but unconfirmed reports that a population has been discovered in northern Lake Michigan, where coasters had been presumed extinct. There's also evidence of a population in Lake Huron. On the Superior shore a run persists in the Salmon Trout River (named for its giant brook trout), thanks to the stewardship of the Huron Mountain Club. These fish may be used to develop a Michigan-adapted brood stock. For the last two years the Copper Country Chapter of TU and the Michigan DNR have been stocking the Gratiot River on the Keweenaw Peninsula with fall fingerlings from the Red Cliff band's Nipigon eggs; this will continue for at least three more years. Some of the fish are getting out into the lake and surviving, and this fall the first spawners are expected back. As part of the Coaster Brook Trout Habitat Acquisition Project, Michigan DNR and TU have committed to the purchase of 100 acres on the lower Gratiot, which will secure 3,000 feet of river and 4,000 feet of prime lake frontage. In Pictured Rocks National Lakeshore the state and the Fish and Wildlife Service have seeded three streams with fall fingerlings for the last two years and will continue for at least another three. The fish being used here are Michigan natives, a brood stock derived from the reef-spawning coasters of Isle Royale's Tobin Harbor. The state wants to compare their performance with that of the Gratiot's Nipigon fish.

Another Isle Royale population, stream spawners, persists in the Big and Little Siskiwit rivers, and a brood stock has been developed from these fish as well. Isle Royale coasters are doing well for the same reason Nipigon River coasters are doing well—they're not getting eaten by humans. When Swainson went to Isle Royale National Park in 1993 he told the managers what he was doing on the Nipigon. Next spring the daily coaster limit for the park was one fish over 18 inches.

In Canada and the US there's enormous excitement about coasters. Anglers are enthusiastic; environmentalists are enthusiastic; Indians are enthusiastic; feds are enthusiastic - and state managers, with the exception of Michigan's, would rather think about something else. Or at least that's the impression one gets when one reads their reports and listens to their excuses. Minnesota managers tell me there's not much potential for coasters because their streams are way shorter than Wisconsin's, lack Wisconsin-type groundwater, and have barrier falls near their mouths. Wisconsin managers tell me there's not much potential for coasters because the habitat has gone to hell and because brook trout don't feel pressure to use the lake the way they do in Minnesota. Wisconsin streams, they explain, are long, charged with groundwater and don't have Minnesotatype barriers.

Research is important, provided it doesn't become an end in itself. "I'm really of the opinion that if these guys had been around 40 years ago, we wouldn't have lake trout in Superior now," says Perich. "They would have never started; they would have just kept studying. In Minnesota they're just paying lip service and responding to pressure, not doing what needs to be done. We've got 60 or 70 streams along the coast, and there aren't even any signs up telling the public that coasters are special fish and that you can kill only one over 20 inches."

At least Minnesota has imposed half-decent harvest regulations. But as soon as a 15-inch coaster, which may not have spawned even once, sticks its snout into Wisconsin it can legally be snatched out and bashed on the head. You can keep bashing until you've killed three, then start over the next morning. At the same time, against the recommendations of the Lake Superior Committee, Wisconsin annually unleashes 120,000 "splake" in Chequamegon Bay. Splake are Frankenstein fish created in hatcheries by crossing female lakers with male brookies, doubtless with the assistance of cackling hunchbacks. They're popular with managers because they don't reproduce efficiently in the wild and therefore create permanent job opportunities. And they're popular with the public because managers can create an appetite for any item just by supplying it in large quantity. Not only are splake an affront to anyone with what George Bird Grinnell used to call "a refined taste in natural objects," they are a major impediment to coaster restoration. First, and most important, they look like brook trout. Anglers can't be expected to distinguish brook trout from splake, and they won't. (Recently a confirmed Minnesota state record brook trout turned out to be a splake after someone decided to thaw it out and perform an autopsy.) Second, splake inhabit nearshore waters and compete with coasters. Third, splake eat brook trout; in fact, they're being used with great success in Colorado as a control agent in lakes overrun with stunted brookies. And fourth, despite the assurances of their creators, splake are not always sterile and therefore may pollute the coaster gene pool.

Wisconsin fisheries manager Dennis Pratt has it right when he observes that land-use practices have degraded the state's northern brook trout streams so that, in their lower reaches, they're full of silt. And he has it right when he observes that now, without the deadfalls and big, thick coniferous woods to slow it down, spring runoff tends to blow out wing deflectors and other instream habitat improvements. He and his colleagues may even have it right when they argue that, because of habitat degradation, Wisconsin brook trout no longer experience the density that used to push them out into the big water. "Most managers probably believe coasters are a unique genetic strain," he told me. "The other theory, the one we tend to believe in Wisconsin, is that a brook trout is a brook trout."

Swainson isn't buying it. "The habitat has to be fixed anyway," he remarks.

Ed Michael, of TU's National Resource Board, says this: "I don't think the bad-habitat argument is valid. If we have to do some stream restoration, we have to do some stream restoration. You don't sit back and say: ÔWell, the habitat's gone. Therefore we're going to farm fish.'"

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Michigan stocks splake in Lake Superior, too—some 80,000 a year. And its coaster limit is even more outrageous than Wisconsin's—three a day over 10 inches. But when I interviewed Michigan managers it was clear they wanted to do better. "Now that the fish we've stocked are getting bigger we need to offer them more protection by clamping down on bag and size limits," declared acting Lake Superior Basin coordinator Steve Scott. He wasn't even scandalized when I suggested that his agency stop contaminating Lake Superior with splake. "There may be an opportunity to replace them with planted coasters," he said. Great idea.

Recalling their failure with grayling, Michigan managers keep cautioning coaster advocates not to get too excited. I can understand that advice, but I can't agree with it. First, Michigan had to try grayling restoration, and maybe it should try it again when biologists better understand the new limiting factors. Second, Michigan grayling had been snuffed out. There was no genetic spark for mangers to rekindle; they had to work with fish from Wyoming and Canada. Native coasters still survive; and when would-be fish restorers have a stock to work with and at least some of the original habitat, they succeed more often than they fail. Contrast, for example, the success of greenback cutthroat restoration in Rocky Mountain National Park, where a few fish persisted in good habitat, with the failure of Atlantic salmon restoration in central and southern New England, where no fish returned to dirty, dam-choked habitat.

Coasters have proven themselves to be survivors. I think they're hanging on in dozens of streams in Minnesota. They are holding their own against the Nipigon's huge run of chinook salmon, which spawn at the same time they do. Along the Ontario shore they are prospering in some of Superior's best steelhead streams. Coaster restoration is already working, and it's going to work a lot better. If that excites you, good. Go help.