Practically every angler is familiar with our state fish, the native brook trout (Salvelinus fontinalis), which actually is not a trout at all. Along with lake trout (Salvelinus namaycush), brook trout belong to the “char” family of fishes. New Hampshire was once home to another notable native char, the Sunapee trout.

The Sunapee, or “golden trout,” was officially named in 1887 by Dr. Tarleton H. Bean and given the scientific name Salvelinus aureolus, the genus “Salvelinus” referring to the chars, and the specific name “aureolus” alluding to its spawning color. Anglers of the time often referred to it as the “white trout” because of its pure white belly during the legal open season. What did the Sunapee trout look like? Distinguished angler and writer Dr. John D. Quackenbos in 1889 noted: “The coloration of the sides varies from a dead lustre cream tint or a delicate olive to a dazzling orange, which, in some specimens, deepens into a dark steel blue on the back, always destitute of motting and with none of the characteristics of the brook trout. The spots are generally secondary, though in some fish vermillion specks are a conspicuous feature, while in others spots of any hue are hardly perceptible. Young specimens taken in summer had sides silvery-white.”

Another account comes from biologist Herbert Warfel’s 1939 Biological Survey of the Connecticut River Watershed: “The brilliant red bellies of breeding males render this species among the most beautiful of the native fishes. The females during the spawning season are similarly but less brightly colored. In non-breeding adults the red is replaced by a golden yellow...”

Native or Introduced?
The facts surrounding the discovery of this relict (remnant) char in Lake Sunapee caused some controversy among early fish biologists. Some theorized the fish could have been an introduced arctic char from Europe known as “saibling” (Salvelinus alpinus). One of the early names given to the Sunapee char was “American saibling.”

Another theory was that the fish showed up a few years following the stocking of the diminutive “blueback trout” (Salvelinus oquassa)
in 1878 and 1879. The blueback was a native char from the Rangeley Lakes region of Maine. In 1881, when anglers first started catching “white trout,” it was thought that these were blueback char that had grown to larger sizes (2-3 pounds) from gorging on smelt. Smelt had been introduced in 1870 as forage for landlocked salmon that were first stocked in 1866 or 1867. Still others said the bigger trout were hybrids of blueback and native brook trout.

The controversy was settled a few years later when, in 1890, Fish and Game Commissioner Elliot B. Hodge caught four trout from Big Dan Hole Pond in Ossipee that were identical to the mysterious trout from Sunapee. Since no bluebacks had ever been planted in Big Dan Hole Pond, the Sunapee trout had to be native. The Sunapee trout was also discovered in Averill Lake, Vermont, and Floods Pond in Maine. Today, modern fish taxonomists group the Sunapee trout, blueback trout and a Canadian char, the “Quebec red trout,” into a single species with the scientific name, *Salvelinus alpinus oquassa*.

**Discovery and Demise**

If golden trout were native to Lake Sunapee, why weren’t they more known to anglers before 1881? After all, European settlers had lived around the lake and plied its waters for a century or more. The answer most certainly lies in the habits of Arctic char, which are a secretive fish. Except when they spawn on rocky shoals on the lake bottom late in the fall, they are rarely found in shallow water, primarily inhabiting depths from 60-100 feet. It is quite possible that they could inhabit a lake and remain unknown to anglers and local folks. Fishing lake depths by boat was rarely done at that time, or the Sunapee trout may have been discovered earlier.

Dr. Quackenbos was enamored by Sunapee char and claimed them to have twice the sporting qualities of brook trout. He steadfastly maintained Sunapee char were native and reasoned that after smelt were introduced in 1870 and became established in the lake, the native char changed their feeding habits and grew to a much larger size. Anglers caught them more often as they followed smelt into shallower water, especially in the spring, when smelt ascended the tributaries to spawn.

How did these Arctic char come to inhabit Lake Sunapee, Big Dan Hole Pond and waters in Maine and Vermont? Some 12,000 years ago, great ice sheets had retreated from the lower elevations of the region and fresh waters were populated by fishes invading from the sea – char, smelt, salmon – as well as strictly freshwater species, such as lake trout and whitefish. Environmental conditions at the time were similar to Arctic environments today. Eventually, these sea-run char populations became “landlocked.” With the passage of time and warming of the lakes, the cold water preferred by Arctic char was found in the depths of certain lakes.

What had also limited char to a few cold, deep lakes was the absence of lake trout and whitefish, two species that competed directly with Arctic char. Evidence suggests that the New England lakes with relic char populations all lacked lake trout and whitefish. When lake trout were stocked, native char soon became extinct, as was the case with Lake Sunapee and Dan Hole Pond.

**Attempts at Restoration**

In 1885, Commissioner Hodge had his attention called to a fish accidently discovered in vast numbers on a “mid-lake rocky shoal.” He wrote to Dr. Quackenbos, “I can show you an acre of these trout, hundreds which will weigh from 3 to 8 pounds each. I could never have believed such a sight possible in New Hampshire.” The rocky shoal turned out to be Loon Island reef at the entrance to Sunapee Harbor. It was the only place where the fish consistently spawned, usually from October 20 to November 20.

Over the years following the char’s discovery, biologists would monitor this site. They would trap fish with nets to collect eggs and milt and raise the fish in hatcheries to re-stock Lake Sunapee and other waters.

**STOCKING GOLDENS**

In addition to Sunapee and Big Dan Hole Pond, Fish and Game stocked 13 other lakes with hatchery-raised Sunapee char, including Conner Pond (Ossipee), Third Connecticut Lake (Pittsburg), Big and Little Sawyer Ponds (Livermore), Tewksbury Pond (Grafton), Penacook Lake (Concord), Star Lake (Springfield), Big Diamond Pond (Stewartstown), Silver Lake (Nelson), Pleasant Lake (New London), Big Island Pond (Hampstead), Crystal Lake (Madison) and Merrymeeting Lake (New Durham). None of these attempts at restoration was successful.
A review of the Department’s stocking records revealed that thirteen other lakes, in addition to Sunapee and Big Dan Hole Pond, received hatchery-raised Sunapee char. Most of these plants of char occurred from about 1890 through 1945. Stockings of char were not done every year and may have occurred only once in some lakes. None ever resulted in established populations of Sunapee char. In the mid-1950s, Tewksbury Pond was reclamation with rotenone to eliminate competitors, stocked with smelt, and closed to fishing in a last gasp attempt to save the species from extinction. Numbers had dwindled in Lake Sunapee and Dan Hole Pond. The final attempt to restore the fish to New Hampshire was in the 1970s, when Sawyer Ponds and Penacook Lake received a token stocking of Sunapee trout obtained from a Maine hatchery. The last attempt to document any existence of Sunapee trout in New Hampshire was conducted in 1990. Several Department biologists set gill nets in Big Sawyer Pond in the fall, but no char were captured, only brook trout.

Could there be another attempt to restore this colorful char to New Hampshire? The species still exists in about a dozen ponds in Maine. There is even a lake in the Sawtooth Mountains of Idaho that has been genetically proven to contain direct descendants of the original Sunapee char from New Hampshire (Sunapee trout eggs were shipped to Idaho and five lakes were stocked in 1925). However, there is virtually no cold, deep lake in New Hampshire that is not inhabited by lake trout or landlocked salmon, severe competitors with Sunapee trout, which initially caused their demise. So it appears the golden trout of Sunapee will likely remain a memory.

Scott Decker is the Program Supervisor for the Inland Fisheries Division. For a bibliography of references and a bonus section on silver trout, visit wildnh.com/150/perspectives.html.
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