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There is gold in north Georgia, metallic - and other kinds. It is still possible to pan for the precious metal in north Georgia streams, but thankfully the process has changed since gold ore was first discovered here in 1829. Prospecting and refining meth-

ods have become much more environmentally friendly than they were in the 1800s. Historic mining techniques had devastating impacts on the riches that comprise another of north Georgia's golden resources, the aquatic wildlife of the Etowah River watershed.

Before the health effects of mercury were recognized, miners used it to purify and consolidate their fine gold. Unfortunately, in the process mercury was often released into the streams. In the 1950s, it was learned that emissions of mercury into the environment could have serious long-term effects on human and animal health. Mercury does not biodegrade very easily, and it accumulates in the tissues of fish, amphibians, and invertebrates over a long period of time. When these animals are consumed, the mercury is absorbed into the body at a higher concentration, which can cause neurological disorders and even death. Many north Georgia lakes post warnings about fish consumption, often due to the bioaccumulation of heavy metals like mercury and other contaminants.

Cyanide, chlorine and similar caustic chemicals were also used to extract gold from ore. Prior to the Civil War until around 1909, a large chlorination plant was in operation at the Franklin/Creighton Gold Mine located on the Etowah River near Hightower, Ga. Today, these chemicals are no longer used for mining in north Georgia.

Another technique that was common in north Georgia was hydraulic mining. This method used "hydraulic giants," similar to a giant fire hose. A high pressure stream of water was used to wash soil and sediment out of a bank into a sluice box. Extensive ditches

were built in the 1800's to provide water pressure to the hydraulic mines. One of the larger ditches, "The Hand Ditch" in Lumpkin County is over 14 miles long. Dams were constructed to divert water into the ditches. Not only were the dams a barrier to migrating fish, but they changed the hydrology of the streams causing the aquatic habitats to be destroyed.

The method of hydraulic mining caused massive erosion of the land. Many streams in the Etowah watershed still show signs of heavy sedimentation from this process. Deposited silt covered nesting grounds for insects and fish, suffocating the aquatic life. Fifteen species of fish and nearly all of the 51 species of freshwater mussels that once lived in the Etowah River Basin have disappeared completely since gold was discovered here. Mining activities surely played a role in some of those extirpations.

If you are careful, you can still pan for gold, the metallic kind. The Chattahoochee National Forest allows gold panning in the beds of most streams crossing U.S. National Forest lands. No fee, special permission or permit is required as long as only shovel and pan are used and no significant stream disturbance results. However, if you seek gold beyond the metallic kind, all you have to do is check out the rich biodiversity of the Etowah River Basin. An amazing 76 species of fish are native to this watershed and there are 75 aquatic plants endemic to north Georgia. "There's gold in them thar hills," alright.

For information about The Nature Conservancy's work in the Etowah watershed, visit [www.nature.org/georgia](http://www.nature.org/georgia). If you would like to be added to the Conservancy's E-mail updates list for the Etowah please call 770/704-7280

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