

OLD IRON BRIDGE ACROSS LIVERMORE FALLS GORGE on the Pemigewasset River, New Hampshire

This under-deck, twin-upper and lower Lenticular Truss Bridge by Berlin Iron Bridge Company of East Berlin, CT may be the only surviving one of its design remaining in the U.S. (often nicknamed the "Inverted Pumpkin Seed Bridge). This one has one arch that curves down at its extremities and another that curves upward below the travel deck of "fish belly flooring beams" which makes it unique. Original railings are missing. It cost \$7,100 to construct.

The first bridge, of wood, across the upper gorge was constructed upstream of the present one between 1866-68. It deteriorated and was closed. In 1869 a replacement was constructed which lasted to May of 1884 when it was declared "insufficient and out of repair." So the town of Campton, claiming its taxpayers would be excessively burdened" brought legal action against Holderness and Plymouth to get those towns to share in the costs of repairs [*Holderness Town Records* Book #6 p. 156]. Ultimately the two towns were ordered to pay for repairs to plaintiff Campton: Holderness \$1,400 and Plymouth for \$2,400. Then, in 1886, a 2-span, 263 ft. long, inverted "double-bowed" pumpkinseed-type wrought iron* bridge was constructed 103 ft above the Pemigewasset River at Livermore Falls remain-ing in service until 1959 when the east span was cut loose and allowed to drop into the gorge to prevent any further crossings. Many today can recall crossing it. Why it was not sold for scrap is not clear other than that harder steel was now in demand.

In the 1870 edition of *Map of the White Mountains* in Eastman's *White Mountain Guide* Livermore Falls is depicted as "...wild and romantic scenery...not surpassed [to] invite the attention of the student and science and lover of nature..." Today many students visit the falls, gorge, beach and island downstream.

A total of 400 such bridges were built by the Berlin Bridge firm but almost all of them with above-deck truss design. They were pre-fabricated at the Connecticut plant from specs submitted by the customer to be easily assembled on site, like piecing together an erectors set. They were the only bridges of their kind in America distinctive by this design.

Of today's extant generic Lenticular Truss Bridges remaining, four are in N.H (Delage Rd. & Dow Avenues Franconia, and Depot Rd, Chichester and Livermore Falls), two in VT, 10 in CT, 10 N.Y., 2 N.J., 2 R.I., 5 Pa and two in Texas. But Livermore Gorge is the most spectacular and unique. [The Society for Industrial Archeology]. It should be listed on the U.S. Interior Department's *National Register of Historic Places*. Many historical artifacts of this era have been vandalized or washed away by time, but not at Livermore Falls where so much of the bridge remains intact.

In 1978 the N.H. General Court enacted the *Livermore Falls Gorge Study Commission* chaired by Rep. Malcolm Tink Taylor (R-Holderness) and later by Senator Raymond Conley (R-Sandwich) issuing a report and recommendations on what to do with this very

spectacular geological feature in New Hampshire. In 1962 Professors of Landscape Architecture John Alexopolis and Rudy Favretti of the University of Connecticut, under a grant from the Spaulding-Potter Charitable Trust, singled out Livermore Falls and the gorge as a highly desirable tourist attraction in the area, especially with a railroad line running very close along its west rim with views of its spectacular water falls and rapids downstream.

At one time there were plans to dam the Pemigewasset River by Ed Clark of Lincoln to create hydropower. Extensive research by the Army Corp. of Engineers and Federal Energy Regulatory Commission was done following public hearings.

In 2013, under the leadership of Plymouth Rotary Club with Holderness town officials Liver more Falls was "rediscovered," partly by accident when Holderness police reported on how much time was spent in responding to complaints of use of the down river beach including jumpers from the bridge superstructure into waters below.

Anchorage of bridge supports are drilled into *Camptonite*, a unique schist first identified at Livermore Falls and now recognized worldwide. A sizeable sample rock is on display at the Campton Historical Society.

Ownership of the bridge, once sold off to a local scrap dealer, is not certain. Is it now a part of the real estate and thus in state ownership? Or has it reverted to the heirs of the junk dealer to whom it was conveyed? Or has that contract lapsed?

*Wrought iron, fabricated from a patent by Henry Cort, is made by first heating ("puddling") the mouton iron ore, then hammering and reheating it several times until it develops a particular fibrous structure giving it strength and resistance after passing between rollers.

Sources: Prof. Alan J. Lutenegger, UMass Civil Engineering Dept.
and Amy B. Cerato for the Society for Industrial Archeology.
<http://faculty-staff.ou.edu/C/amy.B.cerato-1/lenticular>

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