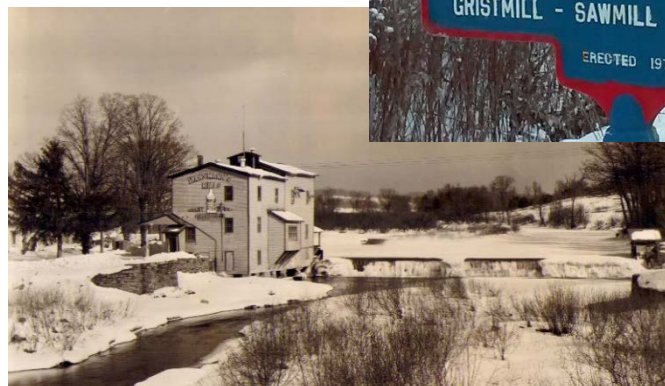


Mills Along the Genegantslet Creek in Chenango County, NY



John H. Buck
2015

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We know there were many water-powered mills in our area in Chenango County. Many of us have encountered written reference to these mills, or perhaps encountered remnants along stream banks, and wondered about their history. Because my own interests began on the Genegantslet Creek, this narrative summarizes and outlines the mills (sawmills, gristmills, carding mills, tanneries) known to have been on this Creek or one of its tributaries. *(A map is shown on the next page, and a name index is found at the end of the paper.)*

Genegantslet Creek starts north of East Pharsalia with headwaters in the New Michigan State Forest, and terminates at the junction of the Chenango River south of Greene, but lies totally in Chenango County, NY. The Creek travels approximately 22 miles on a map, but the DEC website indicates there are approximately 50 miles of stream as it wanders, splits, and gathers water flowing southward. The water elevation drops from about 1600 ft. to about 950 ft. over this distance, for an average gradient of about ½ ft. for every 100 ft. The Genegantslet flows within the Towns of Pharsalia, McDonough, Smithville, and Greene, but tributaries also lie in the Town of German. Our listing of about 40 mills begins near the northern headwaters and proceeds southerly. Principal names are in bold for easier reference.

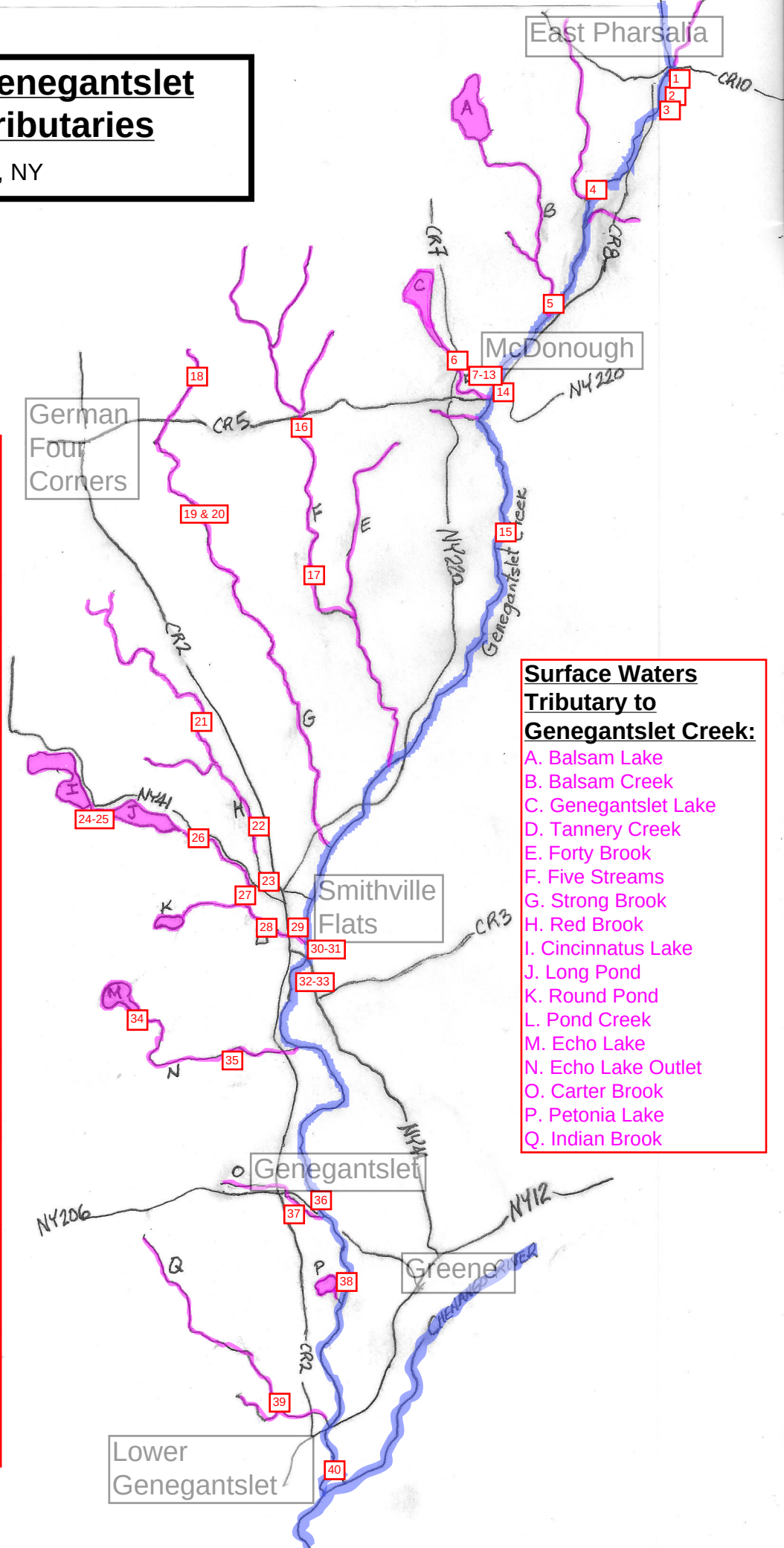
1. The northernmost mill on the list was a sawmill at East Pharsalia owned by **Halbert Grant**. An 1875 map shows a mill pond north of County Route 10, and sawmill south of the highway. In A History of Chenango and Madison Counties, New York, Smith indicates that this mill was constructed in 1867, had a single circular saw, and the fall of water was 20’.
2. The **Powell Sawmill** was located south of Rt. 10, but north of the bridge south of East Pharsalia. The 1875 Atlas (Atlas of Chenango County, NY) indicates a large millpond, and the owner was H. R. Powell.
3. A grist mill was located slightly south of the sawmill with its own millpond, and located just above the Rt. 8 bridge crossing. The mill was owned by **Alanson Coy** in 1875, who lived in a house across the street and was a local merchant. Smith indicates that this mill was built many years prior to 1875, and an 8’ water drop propelled a single run of stones. This mill may have been previously known as the “**Miles Mill**” and had been purchased by **Julius Beardsley** in 1856.
4. **Russell Beardsley’s sawmill** was located in McDonough Township, above the intersection of tributary creek and Genegantslet near the south end of Hurlbut Road where it intersects with Pike Rd. The Russell Beardsley mill is shown on an 1863 map. In 1866 the mill was sold to Russell’s brother, **Julius Beardsley**. The Beardsley house foundation near the mill was still visible in 2012.
5. The **Sprague Sawmill** was located where Beckwith Road crosses the Genegantslet. This is also the location of the confluence of Balsam Creek with the Genegantslet. The 1863 map shows M.L. Sprague with additional mills labeled “**Daniels Mills**” apparently using the same dam. The 1875 Atlas has a business listing for M.L. Sprague and Sons and described hard and softwood products, a steam sawmill, and planing mill. Daniels Mills are still shown in 1875 along with a sizeable mill pond on the Genegantslet. A Sprague family genealogy website provides the following information:

Mill Sites on the Genegantslet Creek and its Tributaries

Chenango County, NY

Known Mill Sites

1. Halbert Grant Sawmill
2. H.R. Powell Sawmill
3. Alanson Coy Gristmill
4. Russell Beardsley Sawmill
5. Sprague Sawmill and Daniels Sawmill
6. Elihu Isbell Sawmill
7. Old Stone Mill
8. Procter Factory
9. Dodge Carding (woolen) Mill
10. Sanford Pitchfork Factory
11. Nevins Paper Mill
12. Triphammer Factories
13. Ensworth Tannery
14. Adam Oyshterbanks Sawmill
15. Unnamed Sawmills
16. Livermore/Banks Sawmill
17. J.L. Smith
18. N. Bowen Sawmill
- 19./20. Greene/ Eggleston Sawmill
21. Skillman/Smith Sawmill
22. J. Kinnier Sawmill
23. Patrage (Partrage?) Sawmill
24. Whipple/Skillman/Dailey Sawmills
25. Stephen Whitmarsh Sawmill
26. Scoville/Tarbell Sawmills
27. Clark/Kinnier-Crozier/Saxton Sawmill
28. Crozier Ashery or Cider Mill
29. Unnamed Pond Creek Sawmill
30. Grant/Powell/Tanner/Hansmann Gristmill
31. Grant/Powell/Bunnell/Rorapaugh Sawmill
32. Read Tannery
33. Whitmarsh Chair & Cabinet Factory
34. Hyman Parker Sawmill
35. Fitch/Crozier Mill
36. Mills at Genegantslet Corners
37. Aron Carter Sawmill
38. McMoran's Knife Factory
39. Gross Sawmill
40. Ira Palmer River Sawmill



Surface Waters

Tributary to Genegantslet Creek:

- A. Balsam Lake
- B. Balsam Creek
- C. Genegantslet Lake
- D. Tannery Creek
- E. Forty Brook
- F. Five Streams
- G. Strong Brook
- H. Red Brook
- I. Cincinnatus Lake
- J. Long Pond
- K. Round Pond
- L. Pond Creek
- M. Echo Lake
- N. Echo Lake Outlet
- O. Carter Brook
- P. Petonia Lake
- Q. Indian Brook

*The **M.L. Sprague & Sons Saw Mill** in the Town of McDonough was originally started by Joseph Sprague and his son Marcus L. Sprague (1819-1881.) It was later run by Marcus's sons, George La Fayette Sprague, Francis Isaiah Sprague and Joseph "Otis" Sprague. After George and Francis retired from the business, it was sold to Otis who continued to operate the saw mill, which by now had been converted from a water driven saw to the first steam driven saw in the town. When Otis retired, he sold the business and residence to his son Raymond O. Sprague (1891-1983) who was the 4th and final generation of Spragues to operate the mill.*

***Merritt Daniels** owned a large farm and sawmill on the other side of the Genegantslet creek from the sawmill operated by Joseph & Marcus Sprague. They shared the same water supply and dam. There was also Alexander Daniels living on adjacent land. The Daniels farmed hops and also ran a sawmill. When Merritt Daniels moved to Nebraska, their land was sold to the Sprague Family whose farm adjoined on the west.*

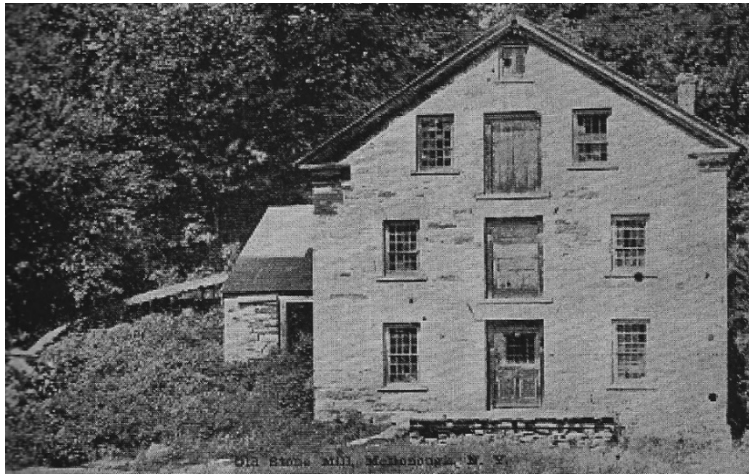
<http://www.sprague-database.org/genealogy/getperson.php?personID=I45014&tree=SpragueProject>



Within the hamlet of **McDonough**, the outlet of **Genegantslet Lake** flows in from the west and meets the main Genegantslet Creek. Because of the elevation difference between the Lake (1500') and the Genegantslet Creek (1250'), many water-powered mills were located close together along the stream. The next few mills described below, were on the outlet stream along what is today called **Tannery Road** in McDonough.

6. **Genegantslet Lake Sawmill.** This mill appeared on the 1863 map with no name, but was built by **Elihu Isbell** in about 1855, and he lived in the nearby house. Smith's history indicated that the mill was owned by **William R. Mygatt** in 1875 and comprised one circular saw powered by a drop of about 12 feet of water. In 1878 the mill was apparently owned by **C.P. Skillman**, who was called **Pollard Skillman** by **Helen H. Read Tuttle**. Tuttle also noted that the mill had been owned by **Isaac Rathbone** and **George Deuel**. In the early 1900s the mill was owned by **Dick Purdy Sr.'s** grandfather, **Charles Purdy**. (Both Purdy and Deuel were grandfathers of Joyce Deuel, Dick's cousin). There are a few limited photos remaining of the mill, and Dick Purdy had fond recollections of swimming and playing at his grandfather Charles' mill and mill pond. There is a house on the site today that may include portions of the mill building. In an account by **Wilbert Heinz** in 2006, he recalled that at this mill, owned by **Charles Purdy**, the

flume and the mill pond were a social gathering spot for the children of McDonough who fished and swam there all summer with Mr. Purdy's blessing.



7. The Old Stone Mill.

There are remaining stone foundations of this mill visible from County Rt. 7. It was built into the north bank of the creek, and the long headrace can still be seen cut into the hillside leading up to the dam. There is a substantial stone dam (below the above-described sawmill) remaining today. The 1863 map indicates there may

have been an earlier dam and millpond closer to the sawmill. Smith indicates that this mill was originally constructed as a woolen mill or grist mill by **Gates Wilcox** in about 1808. The mill was reconstructed of stone by Mr. Wilcox as a grist mill in approximately 1818. Mrs. Tuttle, a later owner of this mill, indicated that wrought iron lettering "1809" was built into the south wall of the masonry. In 1880 the mill was owned by **Charles Greene** and had a 26' overshot waterwheel, which powered three runs of stones. (Note that Charles Greene was married to **Emily Beardsley**, and that both Greene and Beardsley had local water-powered mills in their ancestry.) Wilbert Heinz said that this mill had been derelict since the 1935 flood, but that it was always called the stone mill or grist mill. Wilbert also said that the large slabs and stone used in the creek bed and in the building came from a stone quarry below McDonough on the Creek Road. **Ray Aldrich** indicated in **Don Windsor's** writings that the mill was destroyed in a large flood in 1869. It was apparently then owned by Greene and Ford. Tuttle indicates that the next owner of the mill was **Jacob P. Hill** (her grandfather) and that he employed **Fyrlon Skillman** to produce fine wheat flour for many years. He was succeeded by Thomas J. Hill. The last owners to operate the mill were **Arthur and Helen Tuttle** who used the water power to manufacture battery boxes. Mrs. Tuttle authored a detailed history of the McDonough area and was a well-respected local historian. The Tuttle's sold the real estate, which included the Lake, to the **Genegantslet Lake Association** for a summer resort.

8. Below the gristmill was the **Procter Factory**, built by **Jonathan Procter** in 1824. Procter manufactured small edged tools. Later this was used as a general triphammer shop.
9. **Wilbert Heinz** described a wooden-framed **carding mill** building below the gristmill. It apparently had its own dam and was powered by a turbine. Tuttle indicates that this mill was often called the **woolen mill**, and was built by brothers **Martin and Harry Dodge** who came from Vermont. Their brother **Russell Dodge** also had a tannery on the opposite side of the creek. Tuttle also indicated that the carding mill was later operated by **Hollingsworth** and lastly by **Asa Stot (Stott)** from Tyner.

10. **The Sanford Pitchfork Factory** was the next mill down on the Genegantslet Lake outlet. **Ray Sanford Aldrich's** account, recorded by **Don Windsor**, provides much information on this mill. The Sanfords learned much of their trade at the Procter Shop, working there for about four years. The mill was built into the west bank of the outlet by **Gilbert Sanford** in about 1846. Products included mill irons, axes, pitchforks, and knives. Although Aldrich did not describe the processes involved, these products would typically be wrought, or forged, as opposed to being cast in a foundry. It seems likely that the mill used triphammers and other machinery powered by the outlet stream. Tuttle indicated that this was the "largest of all the enterprises" located on the outlet stream. She said that Sanford forks were valued for their tine strength and durability and that a Sanford fork took a prize at a World's Fair. Tuttle confirmed that the factory was lost when the upper dam burst in the 1868 flood (sic 1869?) and floodwater carried the factory away. She indicated that brothers **Levi and Bruce Sanford** were "fine mechanics" and continued doing blacksmithing and machine shop work after the demise of the pitchfork factory.
11. Tuttle described a **paper mill** located downstream from the Sanford Factory. This was constructed by **John Nevins** and later operated by **John James Lee**. Tuttle wrote that when **Ransom Rathbun** purchased the store (that became Emerson's) in 1836, they operated the paper mill, but that it eventually burned down.
12. Tuttle also wrote that in the general vicinity of the paper mill were three **triphammer factories**. Triphammers were used as a means of forging steel and utilized the stream water power. No further information on ownership or years of operation is known.
13. The next industry was the tannery (the last industry before the final sawmill), for which the current street is named. Tanneries did not typically need much power, but they used substantial amounts of water in their processing vats, and flowing water was also a convenient means to discharge the wastes from the tanning process. Wilbert Heinz indicated that the **McDonough tannery** had a dam, and likely had a raceway through the works for the purposes mentioned. Tuttle wrote that the initial construction of the tannery was in 1832 by **Nathaniel Ensworth**. She indicated that several houses were built around the tannery for its workers, and that later the tannery was operated by **Torrey and Russell**. The longest duration operation was under **Jeremiah Wormuth**, who operated with his wife and sons, tanning about 800 skins per year. When Wormuth returned to Cazenovia, the tannery ceased operations, but Tuttle said some parts of it were still standing in 1925.
14. The final industry in the hamlet of McDonough was another sawmill, one of the earliest in the area. The sawmill was actually located on the Genegantslet Creek at the point of confluence with the outlet creek. According to Smith's history, a mill was constructed on this site by **Adam Oyshterbanks** in approximately 1820. In 1833 **William Bartle** constructed another sawmill at that location. In 1865 this sawmill was purchased by **Orson P. Beardsley** from **Lyman Isbell**. In 1880 the mill was owned by **Milo Webb** and comprised both a sash saw and a circular saw, powered by a water drop of about 10'. There is no trace of this sawmill today.

As we leave the McDonough area, we note the omission of the area's most noted industry of the twentieth century, **Ford Homes**. This facility began as a sawmill on the west side of the hamlet and eventually produced vast numbers of pre-manufactured homes that were produced in McDonough. The Ford saw

and planing mill are not specifically enumerated here, as they had no known history of water-power and were not located directly on the Genegantslet or a tributary.

15. **Sawmills near Lower Creek Road.** As the Creek flows south from McDonough, there were two sawmills located just north of the Lower Creek Road bridge. Both mills are shown in the 1855 map, one remained in 1863, and neither are apparent in the 1875 map. The owners are unknown, but nearby houses are **Purdy, Morse, Fernalld**, and **Black** on the old maps. In recent years **Dick Purdy, Sr.** and the author found traces of both mill dams and some of the building foundations. The southernmost mill building was located on the west bank, and a stone dam crossed the Genegantslet on an angle. Abutments of this dam remain on both sides. The angle of the dam is such that the west abutment is further south than the east abutment.

The old McDonough **Sulphur Springs** Resort was located on the East Bank of the Genegantslet, very close to the Town line, but there was no known use of water power at that site.

As the Genegantslet flows southward from McDonough to Smithville Flats, the water flow rate increases steadily from tributary creeks, and the elevation drops approximately 200 ft. (from about 1240 ft. to about 1020 ft. above sea level.) Along this stretch of the Genegantslet, the named tributaries include Five Streams Creek, Strong Brook (from German along the German Hollow Road), Red Brook (from German along the Ridge Road), and Pond Brook (from Cincinnatus Lake, Long Pond, and Round Pond). (Note that there are inconsistencies in naming these tributaries on some older maps).

The first significant tributary in this section is the **Five Streams Creek**.

16. **Livermore/Banks Sawmill.** The 1875 map indicates that the Banks sawmill and millpond were at the headwaters of the Five Streams Creek (on County Rt 5 just east of Burkholder Rd.) Smith's History of Chenango County indicates that this mill was constructed by **Daniel Livermore**, son of the Town of German's first settler, **Abraham Livermore**. The German four corners was originally called Livermore Corners. Livermore was reportedly a millwright, joiner, and carpenter and built many mills in this area. The sawmill was constructed in 1825 and operated for 5-6 years by Daniel Livermore. The pond was 4-5 acres, the mill had a head of 9' and had two circular saws. The mill then passed to **Harmon O. Banks** and then his brother **Walter O. Banks**. Smith reported that five different streams drained into the mill pond and the outlet creek was then given that name. (Note that this family sometimes used the name **Banks** and sometimes used **Oyshterbanks**. **Walter O. Banks** was the grandson of **Adam Oyshterbanks** (1769-1826)).

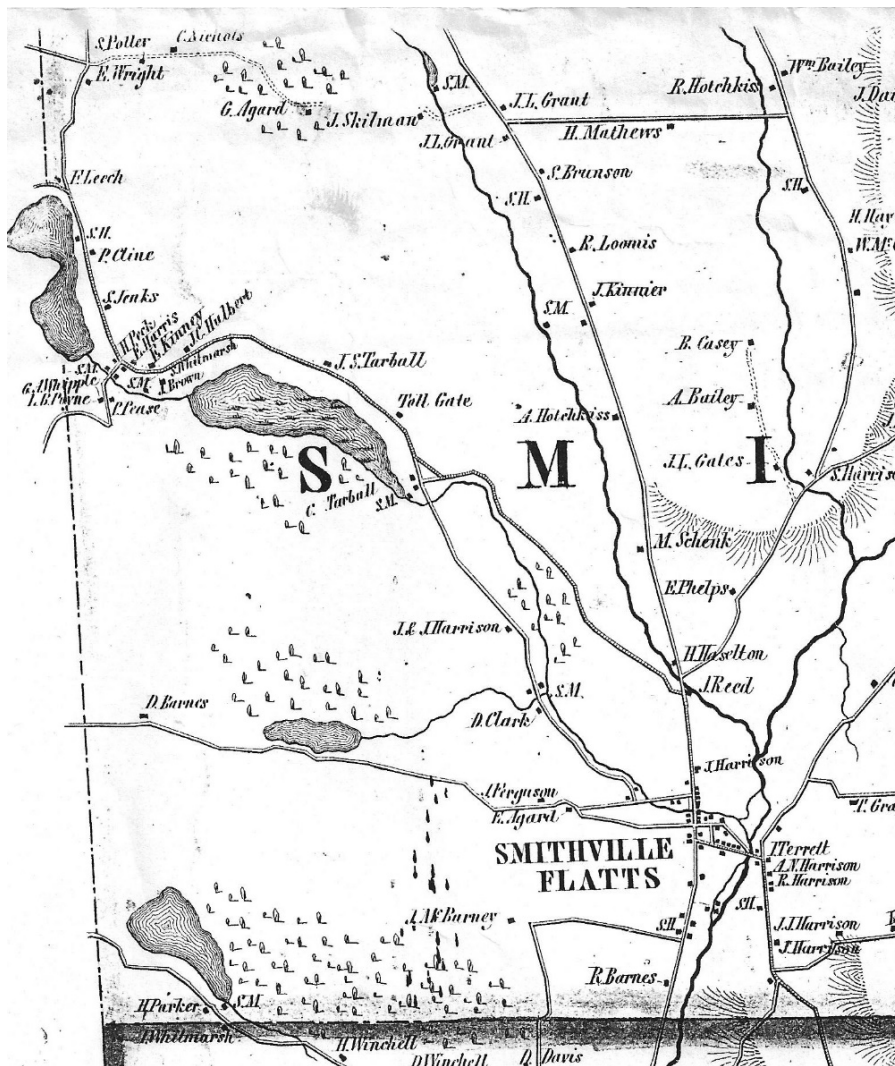
17. A sawmill owned by **J.L. Smith** is shown on the 1855 map. This mill is on the Five Streams Creek in German, but is not shown in 1875.

Moving westerly to the **Strong (also Strong's) Brook** in the Town of German, we see several sawmills on old maps.

18. A sawmill was shown in 1855 slightly north of County Rt. 5, apparently owned by **N. Bowen**. This mill was no longer apparent on the 1875 map.
19. Slightly south of County Rt. 5 we see another sawmill in 1855, apparently owned by **O. Greene**.

20. The 1875 map shows a millpond on Strongs Brook in the Town of German at great lot 105. Smith reports that **George Eggleston** built this mill in about 1863 on the site of an earlier mill, and that the mill consisted of "one upright sash saw". This is likely the same millsite as owned by O. Greene (above). (Note that the name of the stream is erroneous on the 1875 map).

The next stream to the west is **Red Brook**, which originates at the southwest corner of the Town of German. (see a portion of the 1855 map below)



21. Red Brook Sawmill-Smithville.

Both the 1855 and 1875 map indicate that on Red Brook, just below the Town of German line, was a millpond and sawmill. This mill may have been owned by **J. Skillman** initially and later by **J. E. Smith**. An early deed reference indicates that **Livermore** constructed this mill.

22. The 1855 map also shows a sawmill on Red Brook in Smithville, just west of the **J. Kinney** property, but this was gone in 1875.

23. The 1863 map shows a sawmill further south on Red Brook, just behind the current Carpet Store. The closest named landowner on the map was "**A. Patrage**". This sawmill was gone by 1875.

The largest single tributary to the Genegantslet Creek is probably **Pond Creek**, coming from Cincinnatus Lake, Long Pond, and Round Pond. Pond Creek drops in elevation from 1257 ft. at Cincinnatus Lake, to 1238 ft. at Long Pond to 1033 ft. at Smithville Flats. The drop from Round Pond into Smithville Flats is even greater at approximately 300 ft. There were many mills along Pond Creek over the years. The segment from the 1855 map (above) shows the location of many of the following mills.

24. **Cincinnatus Lake** has a dam at its southern end. It is likely that this dam was created to raise the water level for the sawmills shown on the 1855 map. Most prominent at that date was **George Whipple's sawmill**. The 1855 State census reported production of 150,000 board feet of lumber valued at \$1,200 from Whipple's mill. The farm and mill were described in an advertisement in an 1857 *Chenango American*. From the map (above) it appears that the Whipple mill was located south of the dam, but north of the crossroad.

Farm for Sale.

THE subscriber, being desirous of going East, offers for sale his Farm, pleasantly situated 3½ miles from Smithville Flatts, on the Plank Road leading from Smithville to Willet, containing 142½ Acres, well watered and suitably divided into mowing and pasturing and has a good orchard of choice grafted fruit. Also, a first rate water privilege, (the best in the County,) a No. 1 SAW MILL, new and in first rate repair. Also the best facilities for lumbering this side Jerusalem. About 60 acres of the land are under improvement, 78 well timbered. Also 2 good dwelling houses, nearly new and in good repair, and all necessary out-buildings—everything ready to push ahead.

G. A. WHIPPLE.

Smithville, Feb. 3, 1857. c21w7

25. Another sawmill is shown south of the crossroad and closer to Long Pond, apparently owned by Stephen Whitmarsh. In April 1866 a Sheriff's Sale describes a sawmill owned by **Stephen Whitmarsh** at this location, on Cincinnatus Lake Creek. The same announcement references the mill above Whitmarsh as owned by **Whipple**. In 1875 it appears that the sawmills were owned by **F.A. Skillman** and **J. Dailey**. Smith's History of Chenango County indicates that **Frederick A. Skillman** was operating a steam-powered sawmill in the Town, which may have been at this location. Several newspaper accounts over the years mention Skillman's Mill, so it is assumed to have been a sizeable and diverse operation. The earthen dam failed in the 1935 flood, and Cincinnatus Lake now has a dam located on the general site of the Whipple/Skillman sawmill. More information on this dam is found in the *Town of Smithville Comprehensive Plan*.
26. According to Smith's History of Chenango County, **Timothy Scoville**, a millwright, built the first sawmill in the Town of Smithville on the outlet of Long Pond. (This may be the sawmill mentioned in the Smithville Comprehensive Plan as being constructed in 1805 and lasted only a few years). **C.P. Tarbell** had a sawmill on the outlet shown on 1855 and 1875 maps. The 1855 State census indicated that Tarbell sawed 200,000 board feet of lumber at a value of \$1,000. The dam at Long Pond was also extensively damaged in various floods and has now been replaced by an earthen dam with concrete spillway by NYSDEC, the property now owned by the people of the State of New York. At the northwest side of Long Pond, in the woods to the west are stone ruins, likely a mill of some kind that ran from a hillside stream discharging into Long Pond. These ruins are not mapped and no further details are known.

27. Long Pond outlet was also dammed further south, just above the intersection of the Round Pond outlet. This sawmill was apparent on the 1855 and 1875 maps. The farm and sawmill at this location were owned by **Dr. Daniel Clark** as shown on the 1855 map. In the 1855 State census Clark's Mill reported production of 200,000 board feet of lumber with value of \$1,100. Clark also owned the prominent home at the northeast corner of the intersection of Route 41 and Genegantslet Road in Smithville. Dr. Clark left the area in about 1859 and the Chenango American of 9/30/1858 advertised his property and sawmill as follows.

**FARM, FRUIT TREES,
SAW MILL & LUMBER
For Sale.**

A GOOD, well located, and well watered Farm of 172 Acres, about one-half timbered with Hemlock and Hard Wood, the remainder under good cultivation, and well adapted and arranged for Dairying and Stock Raising, with one good sized two story dwelling House, and large Barn, and one small Dwelling House and Barn, with first rate gardens, and very large Orchard of young grafted Trees, which, for extensive variety and good quality of Fruit, cannot be excelled in this region.

Also, for sale a one acre lot, near Dederer's Grist Mill, with two story 25 by 35 house, convenient for two families.

The SAW MILL on the Farm, is recently and well built, and in addition to the ordinary arrangement, contains a separate wheel and drum and Circular Saws, and there is abundance of power and rooms for Chair, Cabinet, Wagon or other work. The motion of one wheel is suitable for Churning by means of wires. The Mill can be run a greater proportion of the time than any in this vicinity.

The above is offered very low, and if sold, I will sell with it or separately, 20 head of Cattle, 34 Sheep, and Hay to winter them.

Whether any of the above are sold or not, I offer, very low, a large quantity of seasoned Pine and Hemlock, from 3 inches thick to 1-2 inch Lath and Siding. Hemlock Lumber furnished to order.

NURSERY STOCK, of great variety of grafted Fruit Trees, Horse Chestnut, common Chestnut and Butternut, Grape, Cherry Currant and other small Fruits, best kind of Basket Willow, &c. Orders for Willows to be made this Fall or coming Winter. **DANIEL CLARK.**
Smithville Flatts, N. Y., Sept. 22, 1858.

The record date is not clear, but the partnership of **Kinnier and Crozier**, two Smithville businessmen, purchased the **Clark Sawmill** in approximately 1860. The 1869-70 Business Directory lists **Hugh Crozier** and **George Kinnier** as operating a sawmill in lot 31 in Smithville (i.e., the Clark Sawmill). Both men were principals in the (later) **Central Valley Railroad**.

In 1873 the sawmill and property were sold to **Albert C. Saxton**. The 1875 map indicates that the property was then owned by **G.C. Saxton. William (Will) Loomis** (1888-1978) recalled that this mill was an "up & down" mill operated by **Ab Saxton**, and that there were remnants of a stone dam. The author found no dam remnants on the Long Pond Outlet in 2012.

28. Lower Pond Outlet Mill. There are masonry foundation remains of a mill further down Pond Brook where the old Tarbell Rd intersects the old Round Pond Road. There is a building shown at this location in 1875 apparently owned by **H.G. Crozier**. The exact nature of this mill is unknown, but adjacent property deeds reference an "ashery". Asheries utilized the ashes of burned hardwoods and converted them to lye and potash. Crozier later purchased the mill property on the Echo Lake Outlet Stream. Adjacent to the pond brook property on the east was the famed "Crazy House" caused by the flooding of 1935. The owner of this property in the late 1800s was Andrew

Nichols, and the Bradley diaries indicate that he operated a cider mill, which may have operated from the old mill site.

28. As **Pond Brook** flows through the hamlet of **Smithville Flats**, it crosses Main Street flowing easterly toward the Genegantslet. In the 1863 map a sawmill was located on the creek just north of Mill Street. Nothing further is known of this mill and it does not appear on the 1875 map.

Pond Creek joins the Genegantslet just a few hundred feet above the Rt. 41 bridge crossing in **Smithville Flats**. As we have noted at other locations, several mills were located near this creek confluence.

29. At the location of what many today recall as the "**Hansmann's Mill**" site (the west side of the creek), there were several earlier mills. According to Smith's history of Chenango County, **Nicholas Powell** built the first grist mill in the Township in 1809 at this location (west side of the creek). This is generally confirmed by a deed from



Photo courtesy John Auwarter, Jr.

first settler **Joseph Agard** to **Nicholas Powell** in 1810, referencing an existing dam. Powell also built a sawmill on the east side of the Genegantslet, but Powell left these mills in about 1820. Smith indicates that **David Grant** built a "**flouring mill**" (on the west bank) in about 1835 (some accounts say 1832). **David Grant** sold the mill to **Smith B. Warner** and in 1844 the mill was sold to **Samuel Townsend** who operated the mill for several years as "**Townsend's Mill**". The 1855 State census indicates that **Ira Witmarsh** was a sawyer in the Town of Smithville, but his business location is uncertain. In 1860 the gristmill on the west bank was sold to **Ira Whitmarsh**. He and his wife **Asenath**, had two children Stephen and M. Josephine. Asenath died in 1861 and Ira died August 24, 1863 leaving daughter **Josephine**. **George Juliand**, acting as "special guardian" appointed by the courts, for **Josephine Whitmarsh**, sold the gristmill to local merchant **Edgar Post** in 1867. **Post** sold the mill to **Ann E. Tanner**, wife of **William Thomas Tanner** in 1870. The Tanners first appeared in the 1865 New York State Census at ages 32 and 25 where Thomas was described as "miller". It is speculated that the Tanners initially worked the mill for Whitmarsh and/or Post. In the 1870 Federal census **Thomas Tanner** is described as "grist miller". Although the Tanners named their business the "**Central Valley Gristmill**" (note the "Central Valley Railroad" and the "Central Valley Hotel" names of the period), most accounts describe the mill as "**Tanner's Mill**". The photo of the mill was likely taken during Tanner ownership. A Chenango American article of 9/1/1881 indicated that Thomas Tanner was then repairing the floor of his gristmill. The mill was completely destroyed and carried away in a flood of 1890. After the flood, the vacant west side mill property was sold by **Caroline Peck** to **Mary A. Rorapough** in August 1890.

30. Development on the east bank (opposite the mill known as "Townsend's" and "Tanners'") was begun when **Nicholas Powell** constructed a sawmill there, shortly after building the gristmill previously described. The property passed to **David Grant** who then sold to **Smith B. Warner** in 1839. The mill and property were sold to **Philo Callendar** in 1841. In 1853 the mill and property were auctioned at a Sheriff's sale, to **John S. Tarbell** for a modest price. Tarbell had a brief business partnership with **Nicholas A. Dederer** and the east bank mills were operated as "**Tarbell-Dederer**" or as "**Dederer's Mill**" for a few years. The 1855 State census reported that Tarbell-Dederer produced 175,000 board feet of lumber valued at \$900 and \$500 of wool carding at these mills on the east bank. The partnership dissolved in litigation and Dederer's assets were sold. In 1859 the Chenango American reported that **Edward Bunnell** was conducting "wool dressing and cloth carding" operations at a mill on the east bank. He was assisted by **John Flagg**, who had previously owned a carding mill at East Smithville. In some manner **Charles Tousley** obtained ownership of the east bank mills and resold the property in 1862 to **Lovisa Bunnell**, wife of **Frederick Bunnell**, and the site became known as "**Bunnell's Mills**". The 1863 map indicates that **K. Bunnell** was living in the house on the east side of the millpond, and that the east side of the dam included "**Bunnell's Mills**" which included three separate structures housing a **sawmill, planing mill, and a carding mill**.

In 1863 an auction was held at the **F.D. Bunnell Mills** (known previously as "**Calender**" Mills) described as saw, planing, carding, and cloth dressing mills with dwelling, barn, and 4 acres. In 1865 **Lovisa Bunnell** sold the house and mills to brothers **Clark and Captain Uriah (Uri) Rorapough**, who had just completed military duty in the Civil War. The Rorapoughs were originally from Tyner ("East Smithville") and their family home was located in the midst of several of the water-powered mills on Bowman Creek. Additional newspaper accounts continue the saga. In 1866 "U. and C. Rorapough" advertised wool carding. In 1870 **Captain Uri Rorapough** was elected Chenango County

**Real Estate, Mills, Cows, &c.,
AT AUCTION!**

A **Mammoth Auction** will take place on the **Fair Ground, in Smithville Flatts, on SATURDAY, MARCH 28TH, 1863, at 10 A. M.,** when the following property will be offered for sale, viz:

Also, the Mills, known as the **Bunnell or Calender Mills**, consisting of Saw, Planing, Carding and Cloth Dressing Mills, with Dwelling, Barn, and 4 Acres of Land, attached. The Mills and Machinery are all in good order.

Also, 300 Acres of good Timber Land lying two miles west of Smithville Flatts. It will be sold in 25 Acres lots, or to suit purchasers.

Also, a quantity of Basswood Lumber, and Logs of Hard and Soft Wood, sufficient to make 150,000 feet of Lumber.

Also, 20 Good Dairy Cows, 5 Two Year Old Heifers, 2 Yearling Bulls, Pair 4 Year Old Steers, span of Mares, 2 Year Old Colt, 2 Lumber Wogons, 2 Set of Bobs, 2 one horse Wagons, &c., &c., together with Household Furniture, too numerous to mention.

Terms—On the real estate, cash or ten years credit, with good security. On the other property, sums under \$10, cash; over, 8 months credit, on approved notes with interest.

F. D. BUNNELL, Auctioneer.
Smithville Flatts, March 24, 1863.



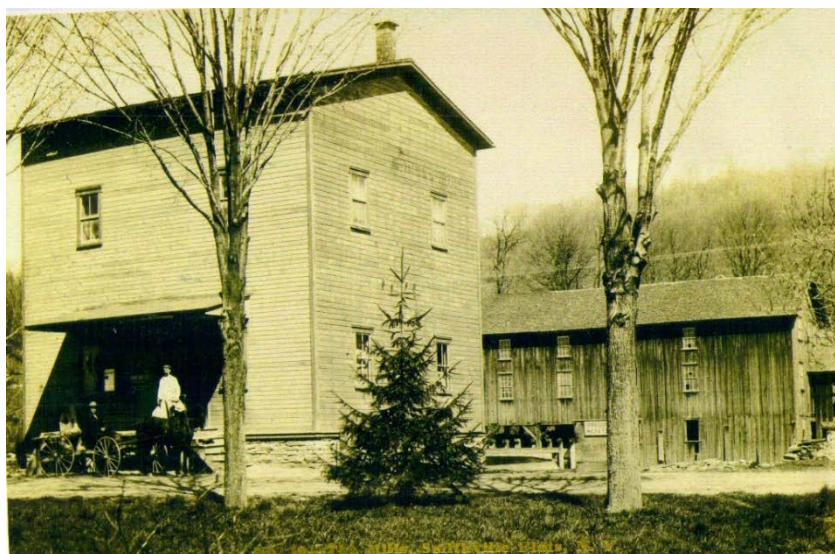
Rorapough home and sawmill
Courtesy John Auwarter, Jr.

Sheriff for a three year term. At that point the brothers' business partnership dissolved and Clark took over mill responsibilities. On May 9, 1872, the Chenango American reported that **Clark Rorapough's** mill was totally destroyed by fire (described

as woolen, sawmill, cider mill). It appears that Clark Rorapaugh then passed ownership of the east bank mill property to his brother Uri, as both Smith and the *Chenango American* indicated that **Uriah Rorapaugh** constructed a combination gristmill, sawmill, and planing mill in 1875 (shown in adjacent below). This was a sizeable, modern, multi-story building, and is believed to be the point at which noted Smithville millwright **Monroe Kinsman** worked with a Norwich foundry to manufacture an iron turbine for the mill. A magazine account indicated that Kinsman realized an error was made in the pattern for casting gears for the mill. He walked to Norwich, awakened the foundry owner, described the corrections to be made, and walked back home through the night in time to begin the next day's work (described more completely in the *Deposit Courier* magazine). (Kinsman lived on the farm on "Kingsman" Rd overlooking Cincinnatus Lake) In the 4/1/1880 edition of the *Chenango American*, **Captain Rorapaugh** proclaimed that he had sawed the "boss log" of Chenango County. The log was described as scaling at 1,142 board feet on the Scribner scale. Rorapaugh further said that the log was 16' long and actually produced 1,140 bf of 1" boards (the author calculates that the small end of the log would have been about 39" in diameter).

After the flood of 1890 destroyed **Tanner's Mill** on the **west bank**, the property was purchased by **Uriah Rorapaugh**, uniting ownership of both banks of the Genegantslet. Rorapaugh soon constructed a new multi-story gristmill with modern milling equipment. The **Smithville Historical Society** has a detailed list of the equipment in the Rorapaugh gristmill

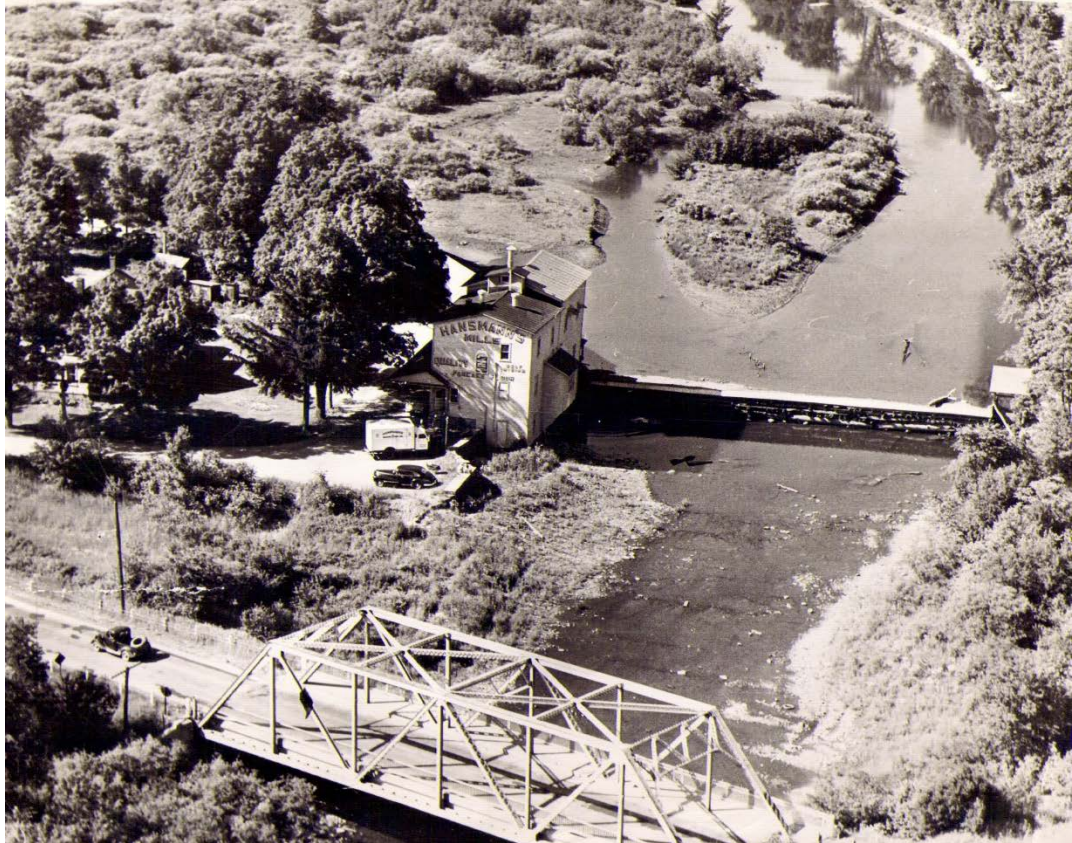
and sawmill, as well as an elevation drawing of the gristmill as constructed in the early 1890s. The photo (courtesy of John Auwarter, Jr.) shows both the east bank gristmill (left) and the west bank sawmill (right) under Rorapaugh ownership. It may not be apparent, but the mill dam



and the Genegantslet Creek pass between the two buildings. The water breaking over the dam can be seen just above the road to the right of the spruce tree. The gable end of the left mill building faintly includes the words "roller mills", but not the name of the business. The small sign adjacent to the right tree indicates "Osgood Scales" which were used to weigh the products of the roller mills.

Uriah Rorapaugh died in May 1911. In 1912 **Mary H. Rorapaugh** sold the entire mill property to **Frederick Hansmann**. This is affirmed by **John Auwarter, Jr.** and in an account by his Aunt **Frieda Cossit**. (Frederick Hansmann's daughter, Meta Hansmann, married **John Auwarter, Sr.** and they became the parents of John, Fred, Rod, and Meta Auwarter). They initially ran the mill as a flour and grain business, but began to experiment and develop a "**self-rising pancake flour**". This flour became very well-known and the graceful **Hansmann's Mill** building a local

landmark. The sawmill on the east bank was not operated by the Hansmanns and there is no trace of the building or equipment at the site today. **Hansmann's Mill** is likely the best-known of all the mills on the Genegantslet. Today, **John Auwarter, Jr.** lives a short distance from the mill, and the main building and a turbine remain at the site in 2013.



In this photo of the 1940s (*courtesy Smithville Historical Society*), note that above the mill, **Pond Brook** flows in from the left and meets the **Genegantslet** flowing in from the right. Although the original Rorapaugh gristmill of the early 1890s is still apparent, the mill was greatly expanded under Hansmann/Auwarter ownership. The first highway bridge crossed the Genegantslet at the location of the parked automobile. The State truss bridge shown in the photo has now been replaced with a new steel girder and concrete-decked bridge at approximately the same location.

31. As the Genegantslet flowed out of the hamlet of Smithville Flats a few small water-powered businesses were located south of the bridge. In 1814 **John Grant** sold property on the Genegantslet, below the bridge, to **Nicholas Powell** for use as a distillery. A **tannery** was located on the west bank. In 1859 this tannery was owned by **T.J. Read** and was destroyed by fire. In 1863, the tannery had its own head race that originated at the large dam of the gristmill/sawmill operations described above. In 1866 the tannery, then owned by **Horace D. Read**, was again destroyed by fire. In 1870 a group of investors were attempting to sell the site, describing its waterpower as an asset. In 1878 the raceway originated south of the bridge and the map referred to the tannery, but it is not clear if the tannery was still in existence at that date.

32. Just north of the tannery, a small **wood-working factory** was situated, using the same head race as the tannery. The 1855 State census indicated that **Andrew Whitmarsh** produced 800 chairs. In the 1865 State census, **Andrew Whitmarsh & Son** produced 10,000 chairs. In an 1866 newspaper account, **Oliver Whitmarsh's** cabinet shop was reported to have survived the tannery fire.

Note: Andrew Whitmarsh first appeared in the 1830 Federal census in Smithville as a shoemaker, along with son Stephen. Ira Whitmarsh (the miller) is believed to be Andrew's son, but that is not known conclusively. Andrew's son Stephen briefly owned a sawmill on the Cincinnatus Lake outlet as referenced earlier. Oliver was another son of Andrew's that apparently operated his cabinet business from a location near the chair-making business. Another son, Andrew Harrison Whitmarsh, operated a chair-manufacturing business in Willet before moving to Cortland to work in a wagon manufacturing business.

In 1875 the **cabinet factory** was owned by **E. Loomis** who lived nearby on the south side of current NY 41. Mr. Loomis' business listing indicated that he manufactured and sold all kinds of furniture, and was also an undertaker.

As the Genegantslet flows out of the Town of Smithville into the Town of Greene, the next significant tributary is the **Echo Lake Outlet**, previously called **Bragg's Pond Outlet**.

33. **Hyman Parker's Sawmill** was located at the south end of the Lake, at the beginning of the outlet from Bragg's Pond. The 1855 census indicates that Parker sawed about 100,000 bf per year and that the mill was water-powered. **Hyman Parker** had an earlier sawmill slightly west across the Broome County line southeast of the intersection of North Street and Echo Lake Road.
34. As the Echo Lake outlet gathers water and flows down the steep forested hillside, west of Genegantslet Road, the drop is precipitous and the stream has cut a small gorge into bedrock. A stone quarry first opened by **Whitmarsh**, and later by **Simon Barnett**, was located in the creek bed, and was well-known for high quality stone. Many early bridge abutments, and also Zion Church in Greene, used rock from this quarry in the outlet ravine. A few-hundred feet west (upstream) from this quarry is a beautiful stonework, once a water-powered millsite. This mill does not appear on any of the three older maps and is not described in any historical accounts that we could locate, so its date of construction and use are not certain. The stonework appears to be of high quality. A rectangular building foundation is located on the south bank on land now owned by **Byron Harrington**. The remains of a stone dam are located on both banks, but the center has been breached. It can only be speculated that this was a sawmill in the middle 1800s, but it must not have operated for any appreciable length of time. Early deeds indicate that the land had been owned by **Walter, Henry, and Seymour Fitch** at various times. The property was eventually sold to **Hugh Crozier**. (Note that this mill was located about ¼ mile west of the old Central Valley Railroad trestle across the outlet and quarry. Hugh Crozier was an investor and principal in the Central Valley.)

The Genegantslet Creek next flows down through the valley of fertile farmland until it reaches the hamlet of the same name, **Genegantslet Corners**. The mills at Genegantslet have been described in a book by **John & Christine Buck** in 2004, commemorating the 200th anniversary of the mills in 2002. This book is available in Moore Memorial Library, but a short synopsis of the mills is given here.

35. The earliest mill location in this narrative was at the **Elisha Smith Sawmill** in Genegantslet. The **mills at Genegantslet** were started in 1802 when **Elisha Smith** constructed a sawmill on the west bank. A few years later the community gained in importance when the **Catskill Turnpike** (actually named the Susquehanna-Bath Turnpike) passed over the Genegantslet Creek on sawmill property. When the Town of Smithville was formed in 1808, it was named for Elisha Smith. In 1811 **Heman Carter** purchased the sawmill and then constructed a gristmill on the east side of the Creek using the same log dam. According to accounts by **Daniel Bradley** and maps drawn by **Frederick Bradley**, there were other small mills along the east bank of the Genegantslet, below the dam, including a carding mill and cloth factory in the 1830s. The mills suffered several floods and fires through various owners over the years, including **Birdsall**, **Huntley**, **Thomas**, and **Hayes**, but were purchased by Daniel D. Bradley in 1871. The photo below shows Daniel Bradley standing on the dam. The sawmill is on the left, the gristmill on the right, and the Catskill Turnpike wooden truss bridge in the background.



Photo courtesy David R. Bradley

Bradley suffered severe losses in the big flood of 12/11/1878. He then commenced construction of a new combination gristmill and sawmill on the west bank, which was powered by an iron water turbine and a new circular sawmill, both manufactured by the **Lyon Iron Foundry** in Greene, NY (now the **Raymond Corporation**.) The turbine was installed on 10/21/1881 by **Burt Ireland** (later to found the Ireland Equipment Company in Norwich, NY).

The photo below shows the new Daniel Bradley mills in about 1890. All houses in the photo remain in 2014, but the mills, dam, and bridge were lost in the 1935 flood. The new bridge on route 206 would be just off the left side of this photo.

Photo courtesy Mr. And Mrs. Bruce Badger



We are all fortunate that Bradley kept detailed diaries for almost 60 years and most are available in Moore Memorial Library. Bradley's daughter Mary married **Cyrus Kinsman** (son of Smithville's well-known millwright **Monroe Kinsman**) and they ran the mills until 1918 when **Leon Beardsley** purchased the property. In 1935 the flood carried away and destroyed the mill equipment and buildings. The sons of Leon Beardsley ran the sawmill until 1997 when **John H. Buck** purchased it. In 2002, **Ralph Beardsley** and **John Buck** recovered a gristmill runner-stone ½ mile down the Genegantslet. Ralph had recalled last seeing the stone when he was a child playing in the Creek. This stone was lost in the 1935 flood, but had been previously lost and recovered by Daniel Bradley in the 1878 flood. The sawmilling and planing operations continue at the site today, powered by diesel generators, 213 years after the first mill was constructed.

36. **Aaron Carter's Mill** – A small Genegantslet tributary stream flows down the north side of Route 206, originating at the Beach farm above Genegantslet Corners. The stream crosses Rt. 206 just below Genegantslet Road, gathers in another small tributary from the south, and flows down through the Beardsley Sawmill property south of Rt. 206. This stream was named Carter Brook and Aaron Carter built a sawmill there in 1825, powered by a 30' overshot wheel. The mill was located just below the intersection of the two tributaries, and the flat area where the mill was located can be discerned today. This mill was operated for many years by the son of **Heman Carter**, who owned the main mills at Genegantslet. The current day right angle

turn of Carter Brook across Rt. 206 seems unnatural, so it is possible that **Aaron Carter** diverted the brook for his sawmill's power back in the early 1800s.

37. **McMoran's Mills** – **David McMoran** emigrated from Ireland and established a **knife making factory** less than 1 mile south of the mills at Genegantslet Corners. According to Smith, the factory was established some time prior to 1855. The census of 1850 shows a large family of McMorans, including 70-yr-old **St. John McMoran**, living in Genegantslet and making knives. The factory employed 5-10 workers and produced shoe, butcher, bread, cigar, kitchen and horse-shearer knives. Because these knives were made of hardened steel, there are various anecdotes about proprietary hardening and tempering practices at the factory. Smith indicated that the factory comprised a trip hammer, lath mill, and shingle mill, and that power was produced by a water drop of about fourteen feet. Old maps show the mill and millpond directly on the Genegantslet, although the site is very close to a natural surface water originally known as Round Pond, now called **Petonia Lake**. The road into the Lake is currently called "**Triphammer Road**". Newspaper accounts from flood events in the 1800s indicate that the McMorans also had a sawmill at the site, although that was not their primary business. Many local collectors have industrial knives stamped with the McMoran trademark.
38. **Indian Brook** is another tributary that enters the Genegantslet just west of the Rt. 12 bridge across the Genegantslet Creek. The 1875 map shows a sawmill and millpond located on great lot 32 on the Indian Brook. It was likely owned by **H. Gross**, the closest named landowner.
39. The "**River Mill**" is the southernmost sawmill in this listing, and was located at the confluence of the Genegantslet and Chenango River. The exact location of this mill is not known. Early deeds (described by Folsom) refer to a Chenango River dam abutting Ira Watson's 84 acre land. This land is the portion of great lot 45 lying north of the Genegantslet Creek and west of the Chenango River. **Ira Palmer** is described in Mildred Folsom's book as "one of Greene's energetic lumbermen in the 1820s". He owned the farm on Rt. 12 below **Young's Round Barn** and was reportedly a successful farmer. He began his farm in 1825 with 167 acres, and eventually sold his then 600-acre farm to his son-in-law, Lewis St. John, in 1865 for \$18,000. According to Palmer's notes in his *Work Book* which began in 1827, he and **Ira Watson** operated the River Mill as well as the **Genegantslet Corners Mill** (described above). Because of his location near the Chenango River, Ira Palmer was able to raft his lumber down the river to bigger cities down the Susquehanna River, and he was gone for months at a time on these rafting expeditions. When the Chenango Canal was completed, Palmer began to ship lumber to New York City. The **River Mill** was located in the general area of a **Native American burial mound** and stockade located on the Bates farm. The burial mound was first excavated in 1829. In 1865 **John C. Marcy** purchased the Ira Palmer farm. It is not certain that "River Mill" was a part of that acquisition, but Folsom reported that in 1900 Marcy removed the sawmill equipment to a site on his farm, thus marking the end of the "River Mill".

At this writing in 2015, there are no remaining water-powered mills left on the Genegantslet or its tributaries. **Hansmann's Mill** may have been the last to operate by water power in the 1950s. Of all the mills mentioned, only the sawmill at Genegantslet Corners (**Beardsley Brothers Sawmill**) continues to operate, and it is now powered by modern diesel generators.

(Corrections, or additions to this description are welcome!)

John H. Buck 2015

Some discussion of sawmilling technology:

Sawing logs began with manual sawing using a long two-man sawblade. Typically the saw was operated vertically, cutting only on the down stroke, with one man above and one man below (the "pit man"). The sawmiller's dilemma began immediately. If you make the saw blade thick for strength and rigidity, you waste power and wood by making too much coarse sawdust because of the blade thickness. The initial solution was to place the saw in a wooden frame. This allowed the saw to be made thinner and tightened in the frame (tensioned). The frame also gave the sawyers an easier way to guide the path of the saw to make more uniform lumber thickness. Lumber sawed in this manner was sometimes referred to as "pitsawn" or "whipsawn" lumber. This manual sawing approach was hard work, and it didn't take long for men to think of ways to make the work easier.

The first sawmills in this country were attempts to mechanize the sawblade mounted in a frame. Since the power sources of steam, fossil-fueled engines, and electricity were not yet available, the obvious choice was the readily available power from flowing water. These early "sash mills" (also called "up & down" mills) needed very little water power and could be fabricated from locally available materials. Because there were two different mechanical actions required, there were often two different water wheels. The first action was the easiest. The sash was a wooden frame holding the vertical saw, and it slid up and down within a set of wooden guides, much like a sash window does. The stroke was fairly short and all that was needed was a rotating shaft (usually from a small undershot waterwheel) and an eccentric and arm that raised the sash and then dropped it. That short arm attached to the eccentric (or crank) was called a "pitman", like the pit man it replaced, and that term is still used today to mean the connecting rod on any engine with a crankshaft. Because of the relative instability of early dogging systems, the logs were often hand-hewn into a rough rectangular shape before dogging into the sawmill. The log (called a "cant") had to be incrementally advanced into the saw with each stroke, but the log had to be backed up the length of the log to start another board. This "backing the cant" action was often accomplished with a simple flutter wheel down under the sawmill. A flutter wheel ran on a horizontal axis and water from a pipe or open trough impacted wooden blades sticking up from the wheel.

The logs, actually the cants, were held by steel "dogs". On up & down mills, the cants were end-dogged, so that the saw had to be stopped near the end of the log to avoid cutting into the steel dogs. In this manner, none of the boards were released from the cant until all the cuts were made. Then the cant was taken off the sawmill and the end of the cant was sawed off to release the sawn lumber.

As manufactured goods became more readily available, a variation of the "up & down" saw became available, called a "muley saw" (also Mulay). This was conceptually the same action, but the frame was cast iron and there was no sash. The muley saws started to become available in about 1825. Larger mills with adequate water power were also able to gang several saws in one sash, thus greatly increasing sawing production. (There is a community near Corning, NY called "Gang Mills" where such equipment once operated.)

All of the saws mentioned to this point left a distinctive linear pattern in the sawn face of the lumber, and there are many barns and old houses in the area that have this distinctive pattern. Because of the rather large teeth and gullets on these saws, the feed rate was large and the distance between sawlines in the pattern was large.

A significant change in sawmill technology began in about the 1860s. Iron foundries became widespread, and Greene and Norwich both had foundries in the 1800s. As some sawmills moved toward higher levels

of production and the factory system, demand for improvements increased, particularly at the end of the civil war. It was generally noted that all of the up & down saws to this point were wasting approximately half of the available sawing time, because they did not cut on the upstroke. An ingenious Shaker woman from Massachusetts is generally given credit for noting this inefficiency while watching two men pit-saw a log. Tabitha Babbitt conceptualized the circular saw, which would always be presenting bits to the cant without wasting a backstroke. There were a few problems to be resolved before circular saws gained wide acceptance. They needed more power to operate and at relatively higher rotational speeds. Early circular mills needed at least 20-30 hp with arbor speeds of several hundred RPM. This meant that the small mills on smaller tributary streams with marginal water flow, could not make the conversion.

At the same time there were many people working on how to get more power from the various higher-flow rate streams and rivers. The first attempts were to study water wheel technology and it was concluded that undershot wheels were relatively inefficient compared with breast wheels or overshot wheels. A major breakthrough occurred with the development of water turbines. Water turbines are really cast-iron water wheels with more complex routing of water and shape of blades (buckets). Early manufacturers simply called the turbines “iron water wheels”. Development occurred over a few decades and included men of science including Fourneyron, Francis, DeLaval, and Pelton. Some of these turbines worked with high-head (greater than 50’ drop), but most of the turbines in our area worked on high-flow, low-head situations. One of the inherent advantages of these turbines was that you might be able to extract 15-30 hp from an iron turbine of only 4’ diameter, with only 8-12’ of water drop. That meant that the water turbine and the circular sawmill were destined to work well with each other. Many mills in Chenango County converted to this technology around the time of the Civil War.

Another development was the use of steam power units for sawmills. Steam still needed a water source (like a stream or pond), but did not need the “head” (vertical water drop). Steam mills were somewhat portable, were more powerful, and could be moved directly into the woods to minimize log transport. It became feasible for steam sawmillers, like Frederick Skillman in Smithville, to move a sawmill into a wooded site for several months, then move to another site. Steam mills were not as dependent on stream flows for sawing. As the twentieth century progressed, the availability of more abundant electrical power, and better highways and lumber trucks, meant that it was no longer practical to move sawmills into the woods. Most sawmills are now in stationary locations with much more emphasis on material handling within the mill.

In the late 1800s the band sawmill was developed and in the twentieth century, virtually all sawmills converted to diesel or electrical power, and used either circular or band mills, often both technologies in the same mill. Later twentieth century developments usually involved improvements in material handling, electronic scanning, and automation.

Sawmilling Technology References:

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<http://www.ledyardsawmill.org/sawmill-history>

<http://en.wikipedia.org/wiki/Sawmill>

Some Discussion of Dams

The amount of water power that a mill could generate was a function of both the flow rate of water available and the vertical drop of the water, called “head”. The Genegantslet Creek typically had more flow rate available than its tributaries, but the available head was higher on the hillsides where the tributaries dropped down steep hillsides. In dry summer months, there was little available water and many mills shut down or operated on limited schedules. Dams were used for at least two purposes in generating water-power. They created, or sometimes increased, available head. They also created a reservoir of water that could recharge overnight when the mill was not operating. Each site required different layout of mill and dam, but certain features were common in the area.

Some mills were constructed distant from the dam and source of water. These mills required long “headraces” or “flumes” to convey the water along the bank, parallel with the supply stream. The Old Stone Mill in McDonough is an excellent example of this type of layout. The use of a long headrace helped protect the mill from serious flood events. In many of the local mills, the mill building was constructed on the streambank at the end of the dam. This allowed for easy adjustment of gates controlling water flow rate through flumes into the mill, but put the mill building directly in harm’s way in flood events. In both designs, a “tailrace” carried the water away from the wheel or turbine. Some mills had very short raceways and some were quite long. Interestingly, mills powered by turbines and water wheels could not function properly in flood events, because the water level in the tailrace was too high.

At many millsites along the Genegantslet, the mill was constructed near the confluence of two streams. That siting sometimes meant a difference in elevation between the two streams allowed the mill to be constructed on one stream, with a tailrace leading to the lower stream.

The dam construction itself depended on whether the stream bottom was bedrock, or just alluvial deposits from the stream. The steepness and character of the stream banks was also a factor. Ideal conditions for a dam would be at a location where the stream was fast-flowing and narrow, bedrock bottom and bedrock sides. Under these conditions a dam could be constructed of stone or masonry. Difficult locations would be where the stream was wide and slow, silt-bottomed, and alluvial silt banks. Under these conditions, dams were often various patterns of intertwined logs with gravel fill. Log dams were often covered with planks to carry the water smoothly over the top and away from the base of the dam to prevent stream bottom erosion. An excellent description of these dams is given by John Auwarter in *Memories of Hansmann’s Mills* and also in Daniel Bradley’s diaries.

Along the lower reaches of the Genegantslet, most of the mill dams were log dams. Nearer the headwaters and on tributaries, dams were often constructed of laid up field stone or creek stone, much like early cellar walls. These dams did not use mortar and were often constructed on angles across the stream. If you walk in a streambed and encounter what looks like a nice fieldstone wall on both banks, look a little closer. You may be looking at the remnants of an old stone dam from a forgotten millsite.

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