

Technical Discussion of the Reconstruction of the Property Boundaries Gungywamp, Groton, Connecticut

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Introduction

These technical notes are meant to accompany the property boundary maps used in the article “Nathaniel Adams’ Two House at Gungywamp” (2024).

Boundary Corners & Subdivisions of “Blinmans Meadow” or “Cranbery Medo”

Christopher Christophers died in 1729. His estate was initially appraised in the summer 1729. One of the parcels of land he owned in Groton was called in the probate documents “Blinmans Meadow’ and “Cranbery Medo [meadow]” (different names for same parcel). In 1742, this parcel was subdivided into four parts for the four surviving heirs. The distribution document that described these four subdivisions is riddled with errors and largely unreliable. Two of the subdivision (1) one tract given to John Christophers and sold to Nathaniel Adams (2) another tract given to Christopher Christophers and sold to James Starr can be reconstructed with a high level of confidence from physical boundary monuments and later deeds. The other two tracts are more conjectural and based upon clues in the distribution agreement. Coordinates of the corners are given at the end of this document.

Overall, there is a two rod (33 feet) north to south discrepancy amongst deeds and physical monuments (boundary makers and stone walls) that suggest two different datum points were employed by surveyors at different times. Some boundary lines essentially lined up two rods either north or south or other boundary lines. To avoid unnecessary confusion all of the boundary lines were standardized southerly most position when there was a two rod discrepancy.

Legally speaking the east line of the “Blinmans Meadow” lot was “Congunjawauge Great Ledges” a rock formation along the west slope of Gungywamp Hill that extends northwest to southeast for a long distance. At points this rock formation is 200 feet wide. It is unclear if the east line was at the base, middle or top of the ledges. The available evidence suggests the east line was initially surveyed as a series of long straight segments between boundary markers (marked trees). In due time the various owners seem to have reached a gentlemen’s agreement as where the east line was on the ground. It was marked by a series of rambling stone walls that follow the top edge of the ledges and slope. A sensible place to place fences to keep livestock from injuring themselves on the rocks and ledges below. This effectively shifted the east line eastward adding a small amount of acreage, largely unusable, to these tracts of land. The acreages discussed in this document reflect the earlier more conservative location of the east line.

Boundary Corners of the Nathaniel Adams Farm (from deeds)

NW – Northwest Corner – The 1744 deed from John Christophers to Nathaniel Adams described this bound as a “heap of stones on a ledge.”¹ This is the only deed to describe the bound. A 2002 survey “set upright stone w/drill hole” which was identified as the survey bound. In colonial terminology this standing stone would be called a meerstone. 1 ½ rods to the north of the stone bound was a stone pile and a second stone pile ½ rod further north.² One of these two stone piles represents a corner bound of Woodmansey lot on the west side Adams lot. This corner was an unspecified distance north of Adams NW corner.³

SE – Southeast Corner – Described in 1744 as a “black oak staddle mark’d on two sides and stones about it.”⁴ It is also mentioned in later deeds with minor changes “Black oak Staddle marked on Two Sides under a Great Ledge of Rocks with stones about it.”⁵

SW – Southwest Corner – Described in 1744 as a “Chestnut Tree with stones about it by the side of a swamp.”⁶ In an abutting deed in 1799 it was described as a “ledge.”⁷ In 1814, it was described as a “point of a ledge.”⁸ It is unclear if these both refer to the same corner bound or two different bounds.

NE - Northeast Corner – Described in 1744 as a “black oak staddle marked on two sides and a heap of stones about it.”⁹ This is the only description of this corner. Later deeds only reference it broadly as the “Great Ledge.”

Reconstruction

Deeds from 1743 through 1814 described part or all of boundaries of the Nathaniel Adams lot. There are clear discrepancies in distances and bearings between some of the deeds. Rather than go through the minutia of those problems, this technical appendix discusses the information used to reconstruct the boundaries as shown on the maps.

South Boundary Line

The south boundary is defined by several sections of stone wall and a man-made ditch through a former cranberry bog/meadow (now a swamp) all along the same line. This line varies from about 55^oT to 55.75^oT. The south line as reconstructed was 143.25 rods long

¹ GLR Book 5 Folios 15 & 16 (1744)

² GLR Map 31-291 (2002)

³ GLR Book 10 Folio 85 (1783) – This deed is poorly written. The key lines is “[southerly] & to a corner of Jno. Woodmansees land [and continuing southerly] unto land Belonging to Sam'll Adams [i.e. NW corner of Adams lot]”

⁴ GLR Book 5 Folios 15 & 16 (1744)

⁵ GLR Book 7 Folio 2 (1763), etc.

⁶ GLR Book 5 Folios 15 & 16 (1744)

⁷ GLR Book 13 Folio 134 (1799)

⁸ GLR Book 16 Folio 260 (1814)

⁹ GLR Book 5 Folios 15 & 16 (1744)

on a bearing $55.65^\circ/235.65^{\circ T}$ (NOTE: this distance and bearing doesn't match the 1740s deeds. Described initially in a defective 1743 deed as 128 rods long with a bearing of "West 25° North".¹⁰ A revised deed in 1744 described it as 150 rods long with a bearing of "West 25° South" [corrected for 6.5° west declination it works out to $58.5^\circ/238.5^{\circ T}$].¹¹ The deeds were in part based upon a 1742 probate distribution document for the Christopher Christophers estate. The evidence suggests this document was riddled with errors which the Christopher heirs were aware of. The 1744 deed basically intended the north and south lines to run parallel. For unknown reasons, on the ground there was a 3° difference in the angle of the north and south lines.)

Six deeds describe part or all of the south line.¹² There are some discrepancies between them. The easiest way to reconstruct this is line is use the deed data that most closely matches the physically monuments and boundaries on the ground.

In 1763, the eastern part of the property was transferred from Nathaniel Adams to his son Elijah. The deed references a datum point, southwest corner (D1) that can be identified on the ground. The southwest corner (D1) in the 1763 deed was where the south line of the property intersected the "middle ditch" which ran northerly from the intersection. The south line in this area is defined by another ditch. The middle ditch is just visible in some aerial photographs in GoogleEarth.

The SE corner can therefore be determined. The distance from D1 and the SE corner was described as 85 rods in the 1763.¹³

D1	41.388063	Intersection of "Middle Ditch" with the south line (also a ditch)
	-72.058334	
SE	41.3902431	85 rods (427.5 meters) $55.5^{\circ T}$ from D1
	-72.0541216	

In 1805, the western half of farm was subdivided and 17.9 acres was sold off to pay Samuel Adams debts.¹⁴ The subdivided parcel had 40 rods and 12 links (40.5 rods) along the south line. This distance matches the distance from the Middle Ditch (D1) to a "T" wall junction (D2).

D2	41.3870270	Wall Junction
	-72.0603547	
		* GIS software calculates the distance between D1 and D2 as 40.6 rods (204.5 meters) @ $55.75^\circ/235.75^{\circ T}$ – a very close match

¹⁰ GLR Book 4 Folio 164 (1743)

¹¹ GLR Book 5 Folio 16 (1744)

¹² GLR Book 4 Folio 164 (1743); Book 5 Folio 16 (1744); Book 7 Folio 2 (1763); Book 13 Folio 134 (1799); Book 14 Folio 223 (1805); Book 16 Folio 76 (1814)

¹³ GLR Book 7 Folio 2 (1763)

¹⁴ GLR Book 14 Folio 223 (1805)

SW Corner Standing Stone
 41.38658333 +/- 3 meter accuracy (field GPS reading)
 -72.06123333

One deed described the SW corner as "point of a ledge".¹⁵ Another deed described the distance between the SW corner and a ditch on the west side of the swamp as 52 rods.¹⁶ In the field a short standing stone was found just below a "point of ledge." The standing stone is 51.5 rods from the west ditch, a close match, confirming this is the physical boundary for the SW corner.

North Boundary Line

The north boundary is defined by a 472 foot long stone wall which does not run in a perfectly straight line. The angle of the wall fluctuates by about 11 degrees (48° to 59°^T).¹⁷ One long stretch (230 feet) runs at an azimuth bearing of 58°^T and likely represents the original survey line. The 1744 deed¹⁸ described the north line as a line 150 rods long with a bearing East 25° North. The surveying transit in the colonial period used a compass that pointed to magnetic north rather than true north. The difference between magnetic north and true north is known as the declination. The declination in the 1740s is estimated at between 6.25° to 6.5° west. Therefore East 25° North converts to about 58.5°^T.

A reconstruction of the parcel of land to the north which was purchased by James Starr in 1743 indicates the common boundary line between them was 143 rods not 150 as stated in the deed. This matches the length of the south boundary line.

The NW corner is defined by either one of two stone piles or a stone bound, the locations of which were determined from the 2002 survey.¹⁹ In the second half the 1700s the subdivision of the Starr property abutting the north side of Adams farm and 1805 subdivision of Samuel Adams estate all seem to have used the stone bound as survey bound. For the sake of simplifying the situation, the NW corner was defined as the standing stone in this study.

NW Corner 41.3893009 Stone pile 2 rods north of stone bound
 -72.0642735

 41.3892699 Stone pile 1 ½ rods north of stone bound
 -72.0642469

 41.3892248 Stone bound
 -72.0642089

¹⁵ GLR Book 16 Folio 261 (1814)

¹⁶ GLR Book 13 Folio 134 (1799)

¹⁷ GLR Map 31-291 (2002)

¹⁸ GLR Book 5 Folio 16 (1744)

¹⁹ GLR Map 31-291 (2002)

NE Corner 143 rods (719.2 meters) $58.5^{\circ T}$ from NW (1743) stone bound
41.3926081
-72.0568767

(D3) This point was described as a meerstone in 1805.²⁰ It was 80 rods S 4° E [171 / $351^{\circ T}$]²¹ from D2 according to the deed. This property line is currently marked by a long length stone wall running at $169.5/349.5^{\circ T}$ – 1 ½ degree discrepancy.

D3 41.3905777
-72.0612410

(D4) This point is within a few feet of stream's junction with the north line of the Adams farm. This junction point was used in 1763 split of the farm into east and west parts. So, when you measure from D2 to D3 (using the angle of the wall) and D3 to D4 you end up at the correct point. This confirms the angle of wall was correct despite the discrepancy with the deed.

D4 41.3914319
-72.0594019

East Boundary Line

In 1744 this line was described as "bounded Easterly & Southerly with a ledge commonly called and known by the name of Congungewamset Ledge sixty eight Rods".²² A subsequent deed in 1763 described it as "Thence Southeasterly with s[ai]d Ledge."²³ The distance from the NE corner to the SE corner is 355.3 meters / 69.5 rods (close to the 68 described in 1744) and suggests the original survey line was a straight line. The current boundaries line which follows various segments of stone walls, suggest the line eventually followed the natural contours of the ledge rather than a straight line. If one uses the stone wall boundary it would add approximately 2.75 acres to the overall acreage of the lot. The bearing of the east line is $318.75^{\circ} / 138.85^{\circ T}$ (nearly parallel with the west line)

West Boundary Line

Described in 1744 as being "bounded with sd swamp and ledges westerly [i.e. westerly side of parcel] sixty six Rods"²⁴ in 1814, it was simply described as "S[outh] by s[ai]d. Woodmansee's land & George Latham's land about 80 Rods".²⁵ There is an obvious major discrepancy in the length of the boundary.

²⁰ GLR Book 14 Folio 223 (1805)

²¹ Magnetic declination in 1805 was about 5° west

²² GLR Book 5 Folio 16 (1744)

²³ GLR Book 7 Folio 2 (1763)

²⁴ GLR Book 5 Folio 16 (1744)

²⁵ GLR Book 16 Folio 261 (1814)

As best as can be determined, the west boundary was a straight line from the NW corner (either the stone pile or the stone bound) to SW corner stone bound. This line runs along some ledges for part of the distance and runs parallel to a swamp for part of the distance. It had an azimuth of 319.5/139.5^{oT} it was 76.5 rods (385 meters) long.

Acreages

Parcel bought by Nathaniel Adams in 1743/1744 64 ³/₄ acres (conservative)
67 ¹/₂ with the additional acreage²⁶
East Part of Farm 29 ¹/₄ acres or 31 ¹/₄ acres (1763)²⁷
West Part of Farm 35 ¹/₂ acres (1763)
1805 Subdivision of West Part of the Farm
17 ¹/₄ acres (described as 17 & 9/10th)
18 ¹/₄ acres (described as 20)

Other Lots in Christopher Christophers Estate Distribution of Blimman's Meadow

Grand total 205 acres

Prentiss Lot (32 acres)

NW 41.3935621
 -72.0663806

SW 41.391611
 -72.0658028

NE 41.3955894
 -72.0614333

SE 41.3941641
 -72.0587044

Christopher Christophers/Starr Lott (45.3 acres)

NW 41.391611
 -72.0658028
 *Estimated from reconstruction of Starr property subdivisions

West Line Angle Change

²⁶ The difference in acres depends upon exactly where you draw the north and east boundaries lines. The north line was survey at least twice resulting in a 2 rod north/south discrepancy. The east line was Gungywamp ledges but it is unclear whether the survey was to the bottom or top of the ledges and whether it ran a straight line or not.

²⁷ Ditto

41.3906330
-72.0655270

NE 41.3941641
-72.0587044

*North line estimated to run at $244.5/64.5^{\circ T}$ 131.5 rods (661.4 meters) from NW

SW 41.3892699 (NW corner of Adams)
-72.0642469

SE 41.3892248 Stone bound (NE corner of Adams)
-72.0642089

Palmer/Latham Lot (63 acres)

The west line of this lot appears to have followed Woodmansey's line for about 34 rods and then the stream for 57 rods (total length 91 rods). This is base in part upon the west line described in GLR Book 13 Folio 134 (1799)

SW 41.3834495
-72.0576796

*As measured from SW corner of Adams farm at 91 rods (457.7 meters) $139.5^{\circ T}$

Junction of West line with Stream

41.3849710
-72.0605380

SE 41.3837840
-72.0580653

*Estimated based upon intersection of east line 86 rods long and south line 99 rods long