

Verplanck Colvin, American Wilderness Surveyor and Savior

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ABSTRACT

To mention New York State and wilderness together is a seeming paradox, yet, less than three hundred miles from the towers of Manhattan, now sadly despoiled, lies a region as big as Yosemite. North of the Erie canal and the course of Empire, between Lake Ontario, Canada and Vermont there are over six million acres that, for millions of city dwellers, is a very convenient wilderness with friendly mountains and the beckoning Olympic Lake Placid.

But back in the 19th century it was a real adventure to get there and Verplanck loved adventure and this is a story of some of his adventures. His first concern was that although many were coming and enjoying it very little was known about it. His second concern was that this area held many of the resources necessary to build our industrial revolution; timber, iron and water. And he became alarmed at the rate at which these resources were being depleted.

Verplanck Colvin was a man of many talents and boundless energy which he lavished on his beloved Adirondacks with barely believable and hazardous treks, very believable maps, lithographs and monuments and a legacy of detailed Reports to the Legislature which are oft quoted here. He could have been a famous artist or author, but instead he threw himself and his fortune into surveying and trying to save this remote region from those who were depleting it. And he was successful at both.

He deserves much more than the little recognition he has received and it is the aim of the present day Colvin Crew to help him gain that recognition.

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First. Let me be frank. I am not one of the scholars of the life, works and times of Verplanck Colvin nor am I one of those who have devoted their lives to investigating and writing about the Adirondack region of northern New York State where he spent most of his working life. So what is it that brought me before this expectant audience with some assurance that I can fulfill your expectations?

It is this. I spent much of my working life in this region as surveyor/forester. First as a State forester, then as an industrial forester, meanwhile becoming a licensed land surveyor “following in the footsteps” of Verplanck Colvin in my daily life, simply doing what most back-country surveyors do. And for those not familiar with that phrase “following in the footsteps,” it is the way a surveyor honors the work of past surveyors by carefully following the evidence they left.

Second, for those to whom the Adirondacks are *terra incognita*, a brief introduction. For many “New York” conjures the sparkling city at the mouth of the Hudson River, now saddened by that ugly deed of terrorism. But there’s more, thirty-million acres more, two thirds forested. And its northernmost reaches border Canada and the St. Lawrence seaway. Here lies a quiet six million acre region of green forests, blue waters and “High Peaks” modestly topping 5000 feet. Not much of a wilderness compared to Alaska, but only 300 miles from New York City and greatly treasured.

To give you another perspective written a century ago by T. Morris Longstreth, I paraphrase from his book titled “The Adirondacks.” I know a country where there are no Vesuvian smokepots, no Himalayan heights, no Samoan trances, no abominable abysses, and yet where there are quiet lakes and haunting vistas that are unutterably satisfying to a man’s soul. It is a country where there is sternness, but sternness tempered by a smile; where there is silence, but silence broken by the call of birds. And if this should seem too soft to those who pine for tragic deaths, I would say that there are still spaces, wild and wide enough, wherein the bewildered man might perish of starvation were his heart set on it. Thus one comes to the Adirondacks, not to eulogize, but to enjoy. Consequently, the professionals keep away. There are no rhinos, and the big game hunter goes to Africa; there are no chances to fall a mile off a cliff, whereupon the big mountaineer goes west and the meek inherit the good average earth that he has left. And because there are so few meek, there is plenty of room for everybody...I find it still much the same today.

And for those interested in a little of the history, geography and geology, the Adirondacks lie just north of the famous Erie Canal, the mainline to America’s manifest destiny in the west. By mid 19th century homesteaders were posting deeds to those western lands and the government’s rectangular land survey was barely keeping ahead of them. Meanwhile, bypassed, but not forgotten, much of the Adirondacks was quickly snapped up from the State by entrepreneurs who found its handy resources of iron, water and timber and capitalized on them to build the American industrial revolution. During the twentieth century that trend was

reversed and much of my story has to do with the part that Verplanck Colvin had in reversing it. Present maps of the Adirondacks sport a blue line surrounding a six-million acre area which is fancifully labeled “Adirondack Park.” I say “fancifully” because only two and a half million acres are owned by the State as forest preserve or true park. The majority is in a variety of private ownerships, many of whom are dedicated to wise conservation. But dedicated preservationists are constantly urging more State acquisitions and dreaming of the time when it will all be park.

Regarding its geography, before pale-face came, the Adirondacks were mostly shunned by the aborigine, the few who tried to eke out a living there being called bark eaters. And that name in the native tongue roughly translates into Adirondack. Then, after the American Revolution, the new New York State government had no way of paying off the veterans except by giving them land and, where else, the Adirondacks. Many of the veterans agreed with the Indians, however, and shunned the region, so much of it remained in State ownership until the coming of the entrepreneurs.

Geologically speaking, I’m a bit shaky, but, to give you the big picture, the Adirondacks are really old; Precambrian! But my geological friends tell me they rose out of the ancient seas relatively recently and the overlying sediments were eroded exposing the acidic granites. Quite different from the Allegheny and Appalachian mountains, the Adirondacks are a part of the Laurentian uplift or the Canadian shield. And again I feel a bit shaky because they tell me the Adirondacks is one of the fastest rising areas of the world.

Then, in 1847 a man was born who, it seems, was destined to survey and even save the Adirondacks: Verplanck Colvin. But that’s in hindsight. Records of his early years show him heading in several other directions; engineering, art and law among them. A scion of an aristocratic family of old Albany, New York, he was tutored then attended Albany Academy. High school at another academy involved him in astronomy, geology and geography and he showed great interest and outstanding artistic talent portraying nature. But his lawyer father had another idea for his future; the family law firm. Young Verplanck spent as much of his free time as possible in the out-of-doors, surely hoping for an outdoor career in his future. But his father remained adamant and insisted that he begin training as a lawyer. Verplanck was dutiful, but disgruntled and slogged through the boring legal work where, surprisingly, he found some things interesting: old land records and maps. Little did he know how interesting these would be later on as an Adirondack surveyor. These led to some interesting field work investigating old descriptions of nearby ownerships.

Then came his introduction to the Adirondacks and the introduction, in the form of several camping trips, led to a lifelong love affair. On these early trips he became greatly concerned by the lack of adequate maps and by the rapidity with which the timber and water resources were being depleted and he voiced his concerns in speech and writing. Regarding the maps, independent study made him aware of the many iron ore deposits there which accounted for many of the inaccuracies of the old maps which were plotted from magnetic compass surveys. Through further study and practice he developed surveying and engineering skills, looking forward to the time when he might correct those old maps.

Meanwhile he was actively exhorting the State to do something about controlling the use of the region's natural resources. Here is a condensed example.

The Adirondack wilderness contains springs which are the sources of our principal rivers, and the feeders of the canals. Each summer the water supply for these rivers and canals is lessened...The immediate cause has been the chopping and burning off of vast tracts of forest in the wilderness, which have hitherto sheltered from the sun's heat and evaporation the deep and lingering snows, the brooks and rivulets, and the thick, soaking sphagnous moss which, at times knee-deep, half water and half plant, forms hanging lakes upon the mountain sides...It is impossible for those who have not visited this region to realize the abundance, luxuriance and depth which these peaty mosses – the true source of our rivers – attain under the shade of those dark northern evergreen forests...The remedy for this is an Adirondack park or timber preserve.

Then in 1872 things began to go his way...toward his *Ultima Thule*, the Adirondacks. Aged 25, he was appointed Secretary of the Commission of State Parks with an appropriation of \$1000 to “aid in the completion of a survey of the Adirondack wilderness of New York, and a map thereof...” He was to submit written reports at the end of each year's work, and if his performance was satisfactory he would receive a salary of \$2500 per year. It is my gleanings from these reports to the Legislature that make up the most interesting part of my report to you.

In 1883, the office of State Land Survey was established with Colvin in charge of surveying State-owned lands in the Adirondacks and he continued in this position, struggling for funds and surveying until 1900.

But, beginning in 1872, Verplanck had to organize and finance much of the survey at his own expense. He believed this necessary because of, “*the erroneous character of the existing maps that often show a level where there are really towering mountains...where worthless lands are given an appearance of value, and valuable lands depreciated...*” And he continued in an early report, “*With the theodolite and transit we have, by our triangulation, carefully eliminated some of the most important of these errors, determining, for the first time, by a network of triangles and great quadrilaterals the relative positions of the great mountain landmarks which will remain unchanged through countless centuries...*”

Some of the details of how he went about this monumental task are interesting. To aid in long distance triangulation, he invented a device of shiny tin and wire to be placed on mountaintop stations to whirl in the wind and reflect sunlight to distant transits. These he named “stanhelios.” In addition to standard leveling procedures, he developed a method of determining the elevations of remote points using surveying barometers. Leaving an assistant at a point of known elevation with a chronometer and one barometer, he went on to the desired unknown points, taking synchronous readings. This method yielded surprisingly accurate elevations, as later surveys proved.

Here is Verplanck's report of one such excursion in September of 1872. *"On the 3d we reached Wilmington at the foot of Whiteface Mountain, which I had selected as the northern corner of the great quadrilateral, and which, it may be remarked, encloses the most mountainous and rugged portion of the wilderness. (For those not familiar with the region, Whiteface mountain stands over the Olympic village of Lake Placid and is second in height only to Mount Marcy.)*

"Leaving an assistant at barometer at lower station, we climbed the mountain and shortly after dark reached Rustic Lodge; a log shanty now occupying my camping ground of 1869. The night was wintry, and the morning of the 4th showed the forest whitened with snow and ice.

"We were early upon the summit and had the instruments up and adjusted. The day was most unfavorable for triangulation. Heavy clouds drifted around and below us, hiding everything. But, after a few dismal hours of waiting, the snow-white vapor lifted and suddenly we saw the rugged mountain crests, dark passes, blue gleaming lakes and sparkling ponds. Nevertheless, the clouds still hung around the central Adirondack peaks, and the summit of Mount Marcy was long invisible. The constant drift of small clouds over the higher summits made the triangulation a slow tedious labor, with more time fretted away in waiting than consumed in work. Two days were thus passed upon the summit.

"At length all the angles had been measured; the Gothics, Marcy, McIntyre, Seward, Morris and St Regis mountains, with all the numerous summits intermediate in view, in the circuit of the horizon had been located; even the corners and points of lakes, and the position of prominent rude buildings of backwoods clearings far below, in the shadow of the deep valleys, were mathematically noted...complete reconnaissance maps made; and two days continuous duplicate barometer readings afforded better data for determining the height of Whiteface."

It amazes me how Colvin appreciates and extols the rugged beauties surrounding him in spite of all the adversities he faces. I'm sure I'd be cussing and wondering if it was worth all that effort.

Colvin's organization of his Adirondack survey was quasi-military, his whole crew being assigned to different squads. He referred to a surveyor in charge as an "officer" with a squad which he called the "men." And while he spent much of his time with the squad doing what he considered the most critical work, he performed prodigies of wilderness travel to check on the others that were often many miles away. Some examples...

To begin the survey Colvin established an eight-mile long baseline on Lake Champlain which lies along the eastern edge of the Adirondacks.

It was my intention to commence the work by the careful measurement of a great primary triangle, near Port Henry, on Lake Champlain, of which the base would be the distance between the center of the light-house on Crown Point, and the center of the light-house on Barber's Point, the distance between those points having been determined to the decimal part of a metre by the United States Coast Survey.

He reached Port Henry and spent a day in preparation. Then the next day, *“Having secured the services of two men for axe-work and pack carrying, we proceeded to the foot of Bald Peak; the weather being quite hot and this the first mountain ascent of the season. The summit being achieved, the instruments were placed, and the axe-men proceeded to level such of the trees as still obstructed the view, either of Barber’s Point light-house – which far below seemed like a speck at the water’s edge – or of the prospect northwestward...Thus engaged we anxiously awaited the flash of the mirror signals from the appointed lake shore stations,...A shout from one of the men at length announced a signal visible on Crown Point...The signal conveyed the unwelcome intelligence that Crown Point light was not visible from the Barber’s Point light-house, a wooded promontory on the Vermont shore intervening. As these two light-houses were the only data so far furnished us by the Coast Survey, there was no zero for angular measurement, and consequently no means of here connecting our work with that of the coast survey.*

“Troubled by the phase which affairs had assumed, I determined to return alone on the morrow to Port Henry to examine into the difficulty and to personally superintend the work going on at the lake shore stations. Accordingly, leaving one assistant at Mineville, with orders to return again with mirror signal to the Bald Peak station, I proceeded rapidly to Port Henry, and put the other assistants everywhere in motion...(then, although it was raining heavily) I procured a team, and, with the other assistant and the large theodolite, drove immediately to Barber’s Point...Reaching the light-house...we were enabled to set up the theodolite...near the top of the tower...The sun first parted the clouds that enshrouded Bald Peak, and almost immediately the bright flash of the helio-stat showed that the assistant had already made the ascent despite the storm...Quickly turning the telescope of the theodolite upon this signal...we were prepared to measure the angular distance between it and the Crown Point light-house...The telescope was now turned eastward, and long and earnest search made among the tree-tops of the projecting portion of Chimney Point, in the hope that at least the spire of Crown Point light-house might be visible...the search was fruitless; and now the flash of a helio-stat...at a point on Crown Point, westward of the light-house showed where the two other assistants had, in accordance with orders, stationed themselves. The angle between this station and the mountain-top was now carefully measured.

Colvin then determined the offset from the Crown Point light-house to the new station, establishing that as the south end of his baseline.

While he was struggling with the baseline his other crews were off in the wilds doing other things. The diary of one of his crew members, edited by Norman VanValkenburgh, highlights some of these things.

“...loafed around camp...went berrying and got three quarts...Had a shortcake which was not very good...caught two brook trout...found a stone for a corner near the creek but it was too heavy for us. We then went for Mr. Parkin’s stone boat and horse, but horse had gone berrying. Then they spent a day trying to find an error in a level line run through Saranac Lake village...found it near Donigin’s hardware store. Made a reading of 11 feet on a 10 foot rod.”

These shenanigans may have had something to do with the antics of Mr. Thew the surveyor on this crew. The diary says. *“Gene, Fred, Noah and Thew went to Placid last night...All except Thew came back tonight...On August 9 the instrument fell over and hit Thew on the head. He took it to Placid. Then later...Thew broke tripod leg...and went to Placid.”* And finally, a day was lost when, *Thew and Bill went searching over line for Thew’s notebook. Did not find it.”*

Meanwhile Colvin was engaged with more serious matters. On a day in August he started in Keene Valley and reached the top of Hopkin’s Peak by noon. *“Set copper bolt No. 9, filled four pages with theodolite notes and drew three maps during the afternoon. Then packed up and set out for Giant Mt. Reached that peak at 7 p.m. and made barometric observations till sunset. Out of water, decided to go down till some was found. Off the trail – in darkness – descending cliffs – across holes and chasms – on dead fallen timber – feeling, not seeing, we made our way down to water, a narrow, swift rill shooting down over the rocks and precipices. Refreshed and invigorated by water – cold and pure – the only drink which the Creator, in his wisdom, has provided for man and beast – we resolved to continue and hideous hours passed as we crept down amid dangers we often suddenly felt when it was almost too late to recoil. It was 1 a.m. when the moon came to our aid and we emerged from the forest...Marching quickly to quarters, we satisfied our hunger by a breakfast/supper and retired for a short rest to fit us for the labors of the next day.”*

These excerpts from Colvin’s reports give a sense of his devotion to the great task he had set himself. A devotion so great that, at times, he seemed to will it to successful completion by the very force of his writing of the descriptions of such herculean, even desperate efforts.

Most Adirondack surveyors try to save their office work for the long winter months, but not Colvin. His writings convey his eagerness to experience the Adirondacks in all weathers. *“We were well aware that winter would overtake us while engaged in this work, but knowing the usual steadiness of that season...hoped to find the winter useful in freezing solidly the otherwise impassable swamps, and enabling us to work even upon the frozen surface of the lakes.*

October is supposed to be autumn, but here, *“In the forest the snow, which had fallen some time before, lay cold and crisp, having thawed and frozen. The air was cold even at the foot of the mountain, and gave us assurance that our encampment on the summit would be cheerless.”* But his description of this night on a mountaintop is moving. *“The view over the lake-land below was strangely beautiful. The silent lakes and somber forests stretched away at the mountain foot, into the obscurity of night, or were lost under the shadow of some towering mountain. It being very still and the stars brightly visible, I was able with the transit to determine the magnetic variation by observations of the upper culmination of the star a ursa minoris. The scene, while this work was being executed, would have well suited the brush of Salvator Rosa. Upon the verge of the precipitous summit, was the glowing campfire redly illuminating the open front of the bark camp, where the guides, in their hunter’s costume, with shapeless felt hats, picturesquely reclining, looked out upon the fire or the depths.*

Beside the shanty the transit instrument, carefully removed from the influence of iron or steel, with its standards and limbs of brilliantly polished brass and silver shining in the light of the lantern held by the assistant: the dark depths below, and the starry dome above, together formed a strange unusual spectacle.”

Contrast that with November 1...*found Mud Lake still open, though the upper part was partially frozen over...Drawing the boats out on the ice margin we turned our backs upon even the remote and desert shores of Mud Lake – lonely doleful water – and with winter closing in around us, loaded with baggage and drawing our boats with ropes over the yielding snow, we started directly westward into an unknown region of dismal wilderness, with whose dangers or obstacles we were unacquainted; a small sack of flour our principal reliance. The desolate snows of the barren marshes – the drear, wintry aspect of everything – gave the scene the appearance of an arctic exploration.*

And that’s not the worst. His account of their adventures during the month of November take up nearly ten pages of his report to the Legislature and must have caused the members of that body to wonder about his sanity. Sinking boats. Encounters with panthers. Naming unknown lakes and mountains. Living on the venison they killed. All the while taking hypsometrical measurements to determine elevations. Writing up notes and working on reconnaissance maps. The snow above their knees...He finally decided to head back for their base far to the east and after several days of exhausting march, reached civilization. *“We had made a circuit of the wildest portion of the woods; we had executed the work nearly as anticipated; and our general course of exploration...had been rigidly and successfully adhered to. That we were all there together again, without the loss of a life, after the many precarious positions the early and severe winter had brought upon us; that some one of us was not now lying shrouded in ice near the good boats we had left in the remote, desolate forest, was a cause for rendering thanks to the All Seeing Providence that had protected us. Amen.*

Then there were other times when Colvin’s labors were not so hazardous and were much more rewarding. For instance, when he was following in the footsteps of an older surveyor in the far western reaches of the Adirondack plateau and trying to recover a very important corner. Accompanied by his crew and one who he referred to only as “the old surveyor”, who had set the corner years before, he writes with the exaltation known only to a surveyor finding a long lost corner. *“...I hurried in advance, as the corner must be near. Entering a level, partly swampy, the line ceased, and as I looked again, some singular hollows, sunken places and contortions in the bark of the surrounding trees caught my eyes. They were evidently ancient witness trees, blazed on one side only, each blaze pointing toward the center of the glade where I stood. A glance showed a crumbling stake, having three small stones, moss covered, at its foot. It was the long sought for corner, the great pivotal point on which all the land titles of nearly five millions of acres depended.”*

After nearly three decades spent in these surveying adventures, Colvin came to know the Adirondack wilderness as well or better than anyone then or even now, yet he wrote, *“Few fully understand what the Adirondack wilderness really is. It is a mystery even to those who have crossed and recrossed it by boats along its avenues, the lakes; and on foot through its vast and silent recesses...In this remote section, filled with the most rugged mountains, where unnamed waterfalls pour in snowy tresses from the dark overhanging cliffs...the adventurous*

trapper or explorer must carry upon his back his blankets and heavy stock of food. Yet, though the woodsman may pass his lifetime in some of the wilderness it is still a mystery to him.

It is a peculiar region; for though the geographical center of the wilderness may be readily reached in the light canoe-like boats of the guides, the cores of this wilderness extend...from these broad avenues of water, and in their interior remain today spots as untrodden by man...as when the Indian alone paddled his birchen boat...and here the panther has his den...and rears his savage kittens undisturbed save by the growl of bear or screech of lynx..."

Colvin carried on the great work that he began in the early 1870s throughout the remainder of the 19th century, often using his own funds, until 1900 when Governor Teddy Roosevelt cancelled his appointment as State Surveyor and gave the work over to the State Engineer. After that, disappointment led to depression and eventually to death in 1920. But his legacy in the form of maps, reports, illustrations and notes lives on. His maps and notes especially form a large part of the archives held by the State Department of Environmental Conservation at Albany and are often referred to by present day surveyors.

And in Colvin's beloved Adirondacks, not only many mountaintops, but lake shores, islands and other points of interest bear the results of his labors in the form of around 300 inconspicuous but permanent monuments known to the surveyors who have followed in his footsteps. And in 1997 at the State Surveyors' conference in Lake Placid I initiated the formation of a group we call the Colvin Crew which now numbers well over 100 hailing from all round the USA. Each year since, we have had a couple of "followings" and have generally been successful in recovering the Colvin monument we were seeking. (More on this in closing.)

I have titled Verplanck Colvin "savior" of the Adirondacks although I know there are others who have helped. But his voice was the first to be heard and heeded. One passage from his Reports to the Legislature which, I'm sure, helped induce them to act regarded a gore estimated at about 25,000 acres. Of this he wrote, "*If this gore exists it is the property of the State; wild lands, forest covered and never granted, sold or donated, so far as we know, since the world first emerged from chaos. The primeval forest here has been so far, ...untouched by the axe, and the accessible portions may rate for their timber, as high as five dollars an acre...and I am afforded the pleasure of turning over to the State a little kingdom of land which...would be worth \$125,000.*

It is advisable to determine by re-survey the exact condition of these lines, and it is to be hoped that we shall have in this gore the nucleus for the Adirondack Park, obtained without expense to the State."

After some twenty years of Colvin's hectoring, in 1885 the State passed what has become known as the "Forever Wild" amendment to the constitution. It says, "THE LANDS OF THE STATE, NOW OWNED OR HEREAFTER ACQUIRED, CONSTITUTING THE FOREST PRESERVE AS HOW FIXED BY LAW, SHALL BE FOREVER KEPT AS WILD FOREST LANDS. THEY SHALL NOT BE LEASED, SOLD OR EXCHANGED, OR BE

TAKEN BY ANY CORPORATION, PUBLIC OR PRIVATE, NOR SHALL THE TIMBER THEREON BE SOLD, REMOVED OR DESTROYED.”

Of all of Verplanck Colvin’s monuments, this one, written on paper, may outlast those that he placed on his beloved Adirondack mountains.

He came. He surveyed. He saved.

In my talk to the State surveyors’ conference at Lake Placid in 1997 I ended with a tribute.

TO VERPLANCK COLVIN FROM A FOLLOWER

The snows of many and many years,

Have covered your footsteps and left us with fears,

They are forever gone.

Yet, as we read the records of your escapades,

Among these mountains and forest glades,

We know that you have won,

O’er time. And we warm our souls before the fire,

You lit. And follow on to reach the heights to which we all aspire.

It inspired the formation of our Colvin Crew which gathers occasionally for inspirational followings. The membership is eclectic and widely scattered, but not yet international.

BIOGRAPHICAL NOTES

Kermit Remele started surveying as a kid with homemade instruments. Began survey training at the New York State Ranger School in 1942. Three years WWII in artillery survey. BS in forestry at the College of Forestry in Syracuse in 1949. Master of Forestry degree from the University of Michigan 1952. Two years public service forester with the NYS Conservation Dept. Ten years industrial forester with International Paper Co. Licensed Land Surveyor in NY and AK. Taught land surveying and forestry at the Ranger School, Wanakena, NY for 30 years. Retired Associate Professor 1991. Formed the Colvin Crew honoring Verplanck Colvin 1997. Wrote a two-part article on Verplanck Colvin published in the “Professional Surveyor” magazine in 2001. Honored with life membership in the New York State Association of Professional Land Surveyors. (NYSAPLS a.k.a. “Nice Apples”)