

## SURVEY LIBRARY UPDATE

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## EARLY AMERICAN SURVEYING EQUIPMENT

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### The Cornerpost

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#### **SEND IN YOUR NEWS**

The success of *The Cornerpost* depends on all of our members. Please consider making a contribution to an upcoming issue. Send your articles, news and photos to **kelly@vsls.org**.

### **ON THE COVER**

An alert VSLS member brought our attention to some of the beautiful drone photos coming out of the University of Vermont's Spatial Analysis Lab. The cover photo and others shown on page 16 were taken by Kelly Schulze, a researcher in the lab. **①** If you see any interesting scenes in your travels, please snap a shot and send it to kelly@vsls.org.

## Special Thanks to the Program Committee

- Joe Flynn, L.S., Chair
- Doug Henson, L.S.
- Gayle Burchard, L.S.
- Harris Abbott, L.S.
- Aaron Fuller, L.S.
- David Fox
- Mike Gaines

We would like to acknowledge the hard work of the Program Committee for putting together our virtual Fall Conference this year. Their flexibility in converting the format to webinars took a great deal of effort, not to mention a good deal of training for the moderators and speakers.

They've put together another excellent program, again online, for the December Seminar, and I hope all of you will participate. You can register at vsls.org or use the registration form on page 23.



f there is one word that describes our work this year, it's resilience. First we dealt the confusion about how and whether to keep working at the start of the pandemic. Then we adjusted to the restrictions in the way we do our jobs. Now, many of us are trying to figure out how to get it all done when the demand for our services has grown so dramatically.

I hope you've all seen a good influx of work lately and, even more, that you're able to get it all done. After the first snowfall in early November, I was relieved to get a temporary break with the Indian Summer, but the snow will get us eventually.

On another note, Scott Taylor has been hard at work over the last several months indexing the thousands of surveys that VSLS had scanned several years ago. Scott has finished organizing and indexing the scans, and Kelly is working on putting this index on the website so that our members (and only our members) can search for files and then contact her for digital copies. As soon as this is ready, we'll send out an email to let you know it's available. Special thanks to Scott for tackling this formidable project.

Next up on our agenda is the December Seminar, which will be presented virtually this year, for obvious reasons. We had very good feedback from the Fall Conference webinars, and we'll be using GoToWebinar again to deliver two interesting presentations by Wendy Lathrop: understanding adverse possession and disputes between adjoining landowners. NSPS is letting us use their GoToWebinar account again, at no charge, and they've been very helpful on the back end in making these events happen.

I know we'll all be happy the day we can meet again in person. Let's keep our fingers crossed that this will be the case for our Spring Seminar, planned for April 16 at Lake Morey Resort. We'll make a final determination about that in early 2021.

In the meantime, stay safe and healthy, folks! **(F)** 

Sincerely,

Mark Day

VSLS PRESIDENT

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## Early American Surveying Equipment

BY DR. RICHARD L. ELGIN, PS, PE ROLLA, MISSOURI

## Much of America's surveying practice descended from the English, but our early surveying equipment did not.

The Old World used the delicate, expensive theodolite to divide its lands, sighting on points and measuring angles on a divided, graduated circle. American surveyors needed to establish boundaries over vast wildernesses which were difficult to traverse, and they needed to do it quickly and cheaply. Enter American innovation, technology and craftsmanship to improve a device used by mariners for hundreds of years, a form of which was being made in England, the magnetic compass. The result was the rugged, inexpensive standard American compass. As one commentator said of the American compass, "where accuracy can be sacrificed to speed and cheapness."

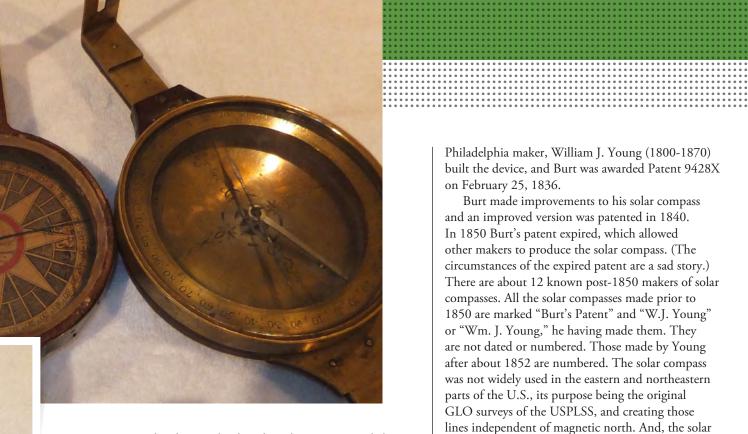
## The Compass

Rugged, the compass with its body of wood or brass, two sight vanes, a leveling device and placed on a staff or tripod, required only a balanced magnetized needle resting on a sharp point. The needle aligned itself with the earth's magnetic field and pointed to magnetic north. Magnetic north was known to move and hence was a poor direction with which to reference boundaries. This movement was well known, being noted in some 1746 instructions that it "...may in time occasion much confusion in the A wooden compass by Thomas Greenough, Sr. (1710 - 1785), **Boston. At top:** three 18th century **New England** compasses. From left to right: unsigned wooden compass with 32-point mariner's paper card. Thomas Greenough, Sr., Boston, wooden compass. Unsigned wooden and brass compass. All of these are plain compasses.



Bounds...and, Contention." Variation, the angle between True Meridian (a line of longitude) and Magnetic North was known to differ at different locations on earth and the angle was known to change in amount over time and location. True North was a better reference direction and in 1779 Thomas Jefferson wrote that the plats of surveys were to be drawn "protracted by the true meridian" and the variation noted.

The first standard American compasses were "Plain" compasses. They used magnetic north and had no mechanism for applying the variation angle, converting magnetic direction to true direction. David Rittenhouse (1732-1796) was an American man of science. He is generally credited with adding a vernier to the plain compass so one could "set off" the variation, the needle still pointing to magnetic north, but the bearing to



the object sighted read on the compass circle being the true bearing. Thus the "plain compass" became the "vernier compass," a great advancement in the American compass.

The Land Ordinance of 1785 specifies that all lines of the U.S. Public Land Survey System (USPLSS) be surveyed "by the true meridian...the variation at the time of running the lines thereon noted." Tiffin's Instruction of 1815 (the first written instructions issued by the General Land Office (GLO) to its Deputy Surveyors) specified "a good compass of Rittenhouse construction, have a nonius division...." This is a vernier compass, "nonius division" meaning a vernier. Thus, the vernier compass became the standard instrument for surveys of the USPLSS. Until.....

### **William Austin Burt** and His Solar Compass

William Austin Burt (1792-1858) was a GLO Deputy Surveyor who, in 1835, while laying out townships in Wisconsin, noted unusual deviations in the lines surveyed using his compass. He began work on a method and form of compass that would determine the direction of the true meridian independent of magnetic north. He invented an ingenious device that uses the observer's latitude, the sun's declination and local time to determine true north. The device mechanically solves the PZS (PoleZenithStar) Triangle. The prominent

Philadelphia maker, William J. Young (1800-1870) built the device, and Burt was awarded Patent 9428X on February 25, 1836.

Burt made improvements to his solar compass and an improved version was patented in 1840. In 1850 Burt's patent expired, which allowed other makers to produce the solar compass. (The circumstances of the expired patent are a sad story.) There are about 12 known post-1850 makers of solar compasses. All the solar compasses made prior to 1850 are marked "Burt's Patent" and "W.J. Young" or "Wm. J. Young," he having made them. They are not dated or numbered. Those made by Young after about 1852 are numbered. The solar compass was not widely used in the eastern and northeastern parts of the U.S., its purpose being the original GLO surveys of the USPLSS, and creating those lines independent of magnetic north. And, the solar compass found application after about 1860, which is "late" compared to most original surveys in the east and northeast.

### The Wooden Compass

Manufacturing a compass in brass requires a foundry, and, at times in a young New World, brass was scarce. Enter Yankee ingenuity and a solution, the compass made of wood. As early as the late 1600s, a few New England makers produced compasses made entirely of wood, to include the sight vanes. Most of these were plain compasses. A few were vernier compasses and made partially of brass. The compass cards for most wooden compasses were printed on paper. Some of these were decorated in a mariner's motif using 32 rays emanating from a central star, North designated with an elaborate fleurdelis. They were used in both mariner's and land surveying compasses. Most of these printed cards have suffered some degradation in the intervening 250 or more years since they were printed.

Some known New England makers of wooden compasses include: Joseph and his son James Hasley of Boston. Joseph (1657-1745) seems to have been the earliest maker in Boston. Thomas Greenough, Sr., Boston (1710-1785) who, with his son Thomas, Jr. likely made more wooden compasses than the other makers. They also made brass compasses. William Williams, Boston (1737-1792) who also made clocks. Samuel Thaxter, Boston A highly ornate Goldsmith Chandlee compass made for John Orndorf (c.1800). One of two known Chandlee compasses with American Eagle holding banner. (1769-1842) who also make brass compasses. Benjamin Hagger, Boston (c. 1790-1834). Benjamin Warren, Plymouth, Massachusetts (c. 1740-?). Gordon Huntington, Walpole, New Hampshire (1763-1804) who made both compasses and clocks. This list was taken from the late Silvio Bedini's book, *Early American Scientific Instruments and Their Makers* (1964). Bedini's book lists other New England makers and further describes the wooden compass.

Bedini says no makers, other than those in New England, made wooden compasses.

To most collectors, wooden compasses, although generally more rare and older, are not as desirable and sought after as ones in brass. Compasses in brass offer the maker the opportunity for beautiful engraving, raising the interest and value for the instrument's artistry. And, wooden compasses, not being used in most of the United States, are just not highly desired by collectors.

## Is it a transit or a theodolite?

Generally the theodolite refers to an instrument with divided circles to measure both horizontal and vertical angles to high

precision, the telescope is relatively long and will not transit, or rotate 360 degrees, about its horizontal axis. The more common term "transit" refers to an instrument with both horizontal and vertical circles (only horizontal on early transits), a 4-screw leveling head, bubbles for leveling and a telescope that will transit. William J. Young is credited with building the first dividing engine in America. That allowed him to cut circles and he is credited with building the first American transit in 1831.

The transit developed and attachments,

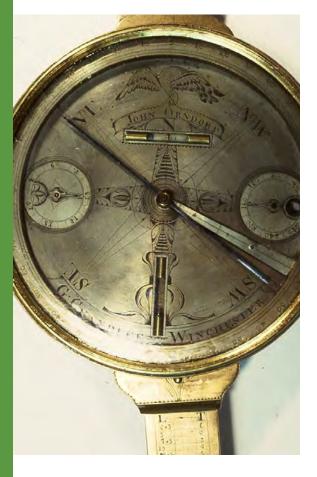
such as a variation on Burt's solar compass, was added by many manufacturers. For mining applications, parallel telescopes were added, thus allowing sightings at large vertical angles into steep mine shafts. Large precise transits were constructed for control surveys and astronomical observations. Horizontal circle diameters can be as large as 18 inches.

#### **Collecting and Values**

Early and vintage surveying equipment is highly collectible. It is the surveyor's heritage, it represents about 200 years of advancing measurement technology, and some illustrate incredible craftsmanship and artistry, especially of the early makers. As with other collectibles, there are highly desirable, usually rare instruments such as the solar compass. And, there are the early Virginia and Pennsylvania makers that made compass that are works of art. But even instruments by prolific makers like W. & L.E. Gurley and Keuffel & Esser are desirable.

There are many collectors of early American surveying equipment, some with very large collections. Most collectors buy and sell instruments, research makers and surveying equipment, and a few offer repair and restoration services. Most collectors focus on a particular maker or two, others focus on the makers of a particular city, like St. Louis, and others are interested in a particular instrument form, such as transits with unusual attachments. There are online resources for early surveying equipment. Some are: surveyhistory.org, run by David Ingram; the Facebook page "Antique Surveying Instrument & Ephemera," run by Dale Beeks; and compleatsurveyor.com, run by Russ Uzes. Among the collector community there is broad and deep knowledge of early American surveying equipment, but that knowledge is not well documented. There are not many reference books on the makers and their equipment. A few have been covered in articles and short treatises, but there are not good reference materials on the broad topic.

To most collectors, what drives value is: 1) The craftsmanship, artistry and rarity of the maker. Generally the winners are the highly decorated compasses by the early eastern makers. 2) Instruments with attachments such as compasses with telescopes and transits with





solar attachments and parallel telescopes. 3) Odd, unusual, very small or very large instruments such as the diminutive "explorer's transit" or a large geodetic theodolite. 4) But, some collectors focus very specifically on a particular maker or form of instrument or city of manufacturer. Likely the most valuable instrument in America: any instrument made by David Rittenhouse. (And the least likely to be found at a garage sale.)

#### •

#### What are we going to do with Grandpa's surveying stuff, and what's it worth?

Regrettably, there is not a national museum or repository where surveying equipment can be donated. Beloved equipment left to families or owned by old surveyors and seeking a home have limited options. The Smithsonian will not accept any such equipment, except for historically important equipment with known provenance. Most such equipment is not highly valuable.

It is likely 90 percent of such equipment would be worth less than \$1000 per piece. Eight percent would likely be worth up to \$10,000. One and one-half percent up to \$100,000. And the last half percent over \$100,000. Most collectors will have no interest in about 90 percent of the equipment offered to them (they already have plenty of early to mid-1900s Gurley and K&E transits and levels). The best recipient for most low- to mid-level surveying equipment may be a local museum, particularly if the equipment was used in the area by a local surveyor.

As with most collectibles, old or vintage surveying equipment is not worth what it was 10 or 20 years ago. The rare, unusual, historically important pieces have not lost their value during that time period and can easily be sold.

## The Future

Boundary surveyors, being mensurators, detectives and historians, have an appreciation for the equipment that laid out America. The equipment is our heritage, to be preserved, admired, studied and displayed. Every boundary surveyor needs an old compass (or transit) and a chain proudly displayed on their desk. They are available at a very reasonable price.

Our thanks to Dr. Richard L. Elgin, PS, PE, of Rolla, Missouri, who wrote this article for *The Cornerpost*. Dick is a surveying practitioner, educator, researcher and author. He owns a large collection of early American surveying equipment. His research interests include the Chandlee family of compass makers, the St. Louis makers and John S. Hougham, among others. Thanks to fellow collectors and researchers Dale Beeks, Dave Ingram and Mickey Shackelford, who contributed to this article. You may contact Dick at **elgin@rollanet.org**. Above, equipment by W. & L.E. Gurley: at left, a transit with solar attachment (c. early-1900s); and a standard American surveyor's compass (c. late-1800s).

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## Vermont Land Survey Library

he Vermont Land Survey Library was created by Act 38 of the Vermont Legislature in the 2019-20 session. The Act requires that any change in a property line that will be recorded in the land records—essentially any subdivision of land or a boundary line adjustment—needs to be surveyed by a licensed land surveyor and also needs to be submitted to the publicly-available Land Survey Library maintained by the Vermont Center for Geographic Information.

These requirements went into effect Jan. 1, 2020. The primary motivation of the Library is to help support the State's investment of almost \$2.5 million to build a modern statewide parcel data set. Open access to professionally-prepared plats will allow us to maintain and improve the statewide parcel data, which is by far to most popular data set we provide. We've already used records from the library to update some parcel data, and we know that many vendors who provide parcel maps to towns regularly check the Library.

We believe that there are many other benefits to having an easy to access public record of land surveys, not the least to your fellow surveyors. The limits that COVID has placed on travel and in-person contact has underlined the importance of being able to access important documents like surveys remotely.

#### **CURRENT STATUS**

To date there are 242 surveys in the library. The majority of these are subdivisions, followed by general property surveys, boundary line adjustments and a few other types.

Surveys have been submitted from all over Vermont, but as we would expect, more have come from the areas with higher rates of development, with Burlington and Shelburne being the two towns with the most submissions to date.

Since this is the first year of the library, we have been a bit uncertain about how many surveys we should reasonably expect to see in a given period. The COVID situation has likely impacted the pace of land development and surveying work as well. On average we have seen a little over 20 submissions a month (although there was a mysterious

The limits that COVID has placed on travel and in-person contact has underlined the importance of being able to access important documents like surveys remotely. BY DAVID FOX, VCGI

Current Count of Surveys, by Type



Total surveys in library

101 Subdivisions



General





uptick in volume right before I presented about the Library at the September VSLS meeting).

We've had submissions from 54 different surveyors, although some people have submitted under their company name. While most frequently, people have submitted one or two surveys, we have had some folks that have really embraced the library and submitted over 20 surveys – some of which are from before 2020, which is great.

We don't have a sense of how many surveyors have done work this year that has not yet been submitted to the library. There are only a handful of towns in Vermont that have online access to their land records, but we are able to see some towns, for example Colchester, where there are transactions that should be in the Land Survey Library but are not yet. There are no deadlines articulated in the legislation for submitting surveys to the library, but we hope the community will embrace submitting surveys as soon as is practical given your

other commitments. We've been approached by some municipalities about incorporating the Act 38 requirements into their rules and guidance at the local level.

#### **HOW TO SUBMIT**

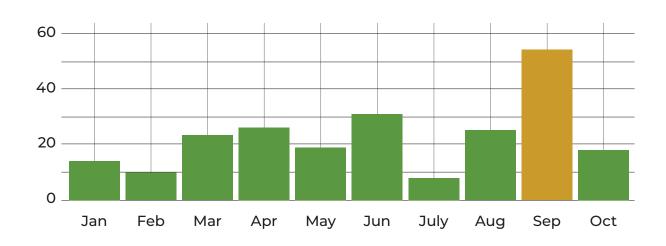
To facilitate submissions to the Library, VCGI has built a basic web map interface at **maps.vcgi**. **vermont.gov/landsurveylibrary**. This application allows surveyors to draw the general outline of a survey on a map, fill in some basic information, then attach a PDF to the record, very much like an email attachment. We have a much more detailed walk-through about submitting a survey to the library on our web site at **landsurvey.vermont.gov**.

VCGI staff do a basic review of the submission to make sure the necessary data is included and also that the attachment is a plat prepared by a licensed land surveyor (not, for example, a site sketch or other kind of document). To date we have not had anyone try to load anything that was not an official survey.

The most common mistake we see with submissions is when a plat has not been attached. If this happens, you'll hear from us when we do the review and can always email us the correct plat for attachment. A common request has been for the ability to edit or correct information on your submissions; some of you have found that they are "locked" once submitted. This is a trade-off between not being required to login to make a submission and prevents anyone from altering your information. Again, we are always happy to make updates or corrections for you.

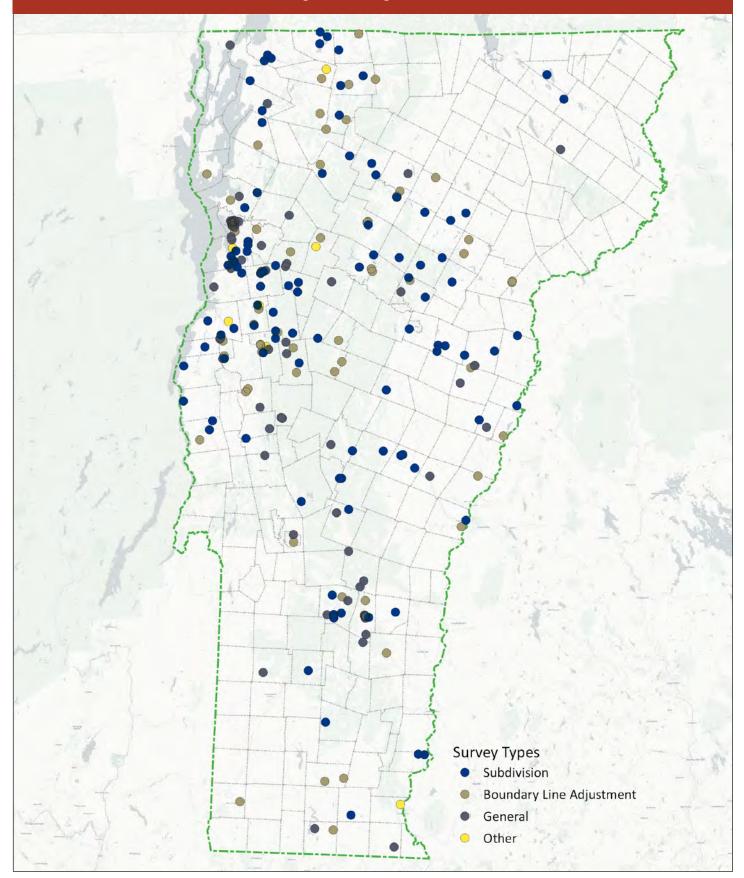
We appreciate the time you have taken to submit to the Land Survey Library, and if you haven't submitted yet, we look forward to seeing you there soon. **(F**)

If you ever have issues working with the Library or suggestions about how to improve it, feel free to contact David directly at david.n.fox@vermont.gov.



### **Surveys Loaded Per Month**

## As of November 1, there have been 242 submissions to the Land Survey Library from across Vermont.





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#### New Partners Named

Gerald Tarrant, Paul Gillies, and Daniel Richardson are pleased to announce that Ronald A, Shems became a named partner on January 1, 2020, and that Stephen F. Coteus and Michael J. Tarrant II became partners on February 1, 2020. The firm is now known as Tarrant, Gillies, Richardson & Shems, LLP.



Ron joined the firm on January 1, 2019. He is a former Chair of the Vermont Natural Resources Board, founding partner of a Burlington law firm, and Vermont Assistant Attorney General.

Ron's practice includes civil and appellate litigation, utility, energy, Act 250, land use, environmental, municipal, government transparency and accountability, civil rights, non-profit, cooperative, and governance law.



Mike first joined the firm in 2015. His practice builds on three separate judicial clerkships at the Vermont Superior Courts, with Justice Harold E. Eaton, Jr. at the Vermont Supreme Court, and with Chief Judge Christina C. Reiss of the Federal District Court for the District of Vermont.

Mike represents a wide array of municipalities, individuals, and businesses. Mike's practice involves most areas of general practice, but focuses on: municipal, zoning and land use, landlord and tenant, probate, real estate, and general civil litigation.



Steve joined the firm in 2016 after two judicial clerkships, first with Justice Marilyn S. Skoglund of the Vermont Supreme Court and then with Judge Peter W. Hall of the United States Court of Appeals for the Second Circuit.

Steve represents towns, school districts, businesses, and individuals. He has a particular interest in First Amendment and public records law. His practice encompasses transactional and civil litigation matters, including land use, contract, real estate, municipal, probate, general civil litigation, and appeals.

Founded in 1991, Tarrant, Gillies, Richardson & Shems is a full-service law firm conveniently located in the heart of Vermont's Capital City, Montpelier.

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## Random Notes



### A Drone's-Eye View

Jarlath O'Neil-Dunne, director of UVM's Spatial Analysis Lab, posted these breathtaking photos on Twitter in October. The photos were taken via drone by Kelly Schulze, a GIS Specialist and UAS pilot in the UVM Spatial Analysis Lab. Jarlath noted on Twitter, "Our masks are on and our drones are out, bringing you the very best of the Green Mountain State fall foliage and low COVID-19 rates."

#### **Unpacking Swiss Precision**

Some VSLS members may be familiar with Stoppani compasses, manufactured by the Swiss company Stoppani founded in 1913. The one shown here belongs to my long-time neighbor Malcolm Wright, who moved recently to Shelburne. This beautiful precision instrument is about 3 <sup>1</sup>/<sub>4</sub>" square, with a wood case 4" square.

Curious details include the division of the circle into 400 gradians (= gons), marked counterclockwise. Thus each quadrant has 100 gradians. Evidently this metric division of angles was used more in Europe, particularly in the Scandanavian countries.

The sighting vanes fold down sideways into the heavy case, not centered on the axis of the instrument. There is no threaded hole on the underside of the instrument, just a circular recess which presumably fits over an adapter on top of a tripod or staff.

My neighbor's great-grandfather George B. Wright grew up in Milton, Vt., and moved to Minnesota, where he was a surveyor for the railroad and a founder of Fergus Falls, Minn. His great-grandson came back to Vermont 50+ years ago. **\*** 



Extra detail found on the Internet: Stoppani is a Swiss manufacturer created in 1913 and located in Bern (see stoppani.com). This design is identical to Sprenger's instrument.

- MALCOLM MOORE, L.S.





### Technical Data

- Dimensions: 95 x 82 x 18 mm
- Weight (w/o case): 580 gr
  Case material: brass. Vanes fold into side
- slots.
- Transit lock: a big flat head screw
- Box material: light wood lined with felt
- Divisions: 400 grades counter-clockwise.
- Ruler: 70 mm

Comparison Stoppani vs. Sprenger:



Send In Send In Send In something interesting... Your Photos Kelly@vsls.org



## "America Has Two Feet. It's About to Lose One of Them."

Read the *New York Times* article about the retirement of the U.S. survey foot. Search on Google: **NYT survey foot** 

#### June 17, 2020, 6 p.m., Zoom Videoconference

The meeting was called to order at 6:03 P.M. In attendance were Mark Day, Lisa Ginett, Randy Otis, Keith Van Iderstine, Paul Hannan, Nate Yager, Becky Gilson and our Administrator: Kelly Cochrane-Collar.

#### Secretary's Minutes

Minutes for the Executive Committee meeting dated May 21, 2020 were reviewed. The motion was duly made and seconded unanimously: to approve the revised minutes of the May 21, 2020 Executive Committee meeting.

#### **Treasurer's Report**

For the period of January 1 to June 12, 2020: total income is \$23,119.51; total expenses are \$24,561.79, for a net income of \$-1442.28. Bank account total = \$56,694.51. Membership dues are down slightly from last year at this time.

#### Administrator's Report

Kelly will meet with the Program Committee soon to start working on an alternative Webinar format for our September Fall Conference, as it seems likely that we will need to move to a virtual event. This would allow people to attend without worrying about COVID-19, and perhaps we could offer a small group the ability to attend the meeting in person. Kelly said NSPS is offering the state societies the use of its subscription to GoToWebinar, and she will check that out. She may also put out a survey to members regarding whether people would prefer to come to the meeting wearing a mask or attend via an online format. Mark wondered about the possibility of holding smaller regional meetings for continuing education so that surveyors can meet on a less crowded basis. NYSAPLS has a new portal where members can print their seminar certificates and see how many education credits they've earned toward

their next licensure renewal period. The group agreed that this would be very helpful for our members. Kelly will look into providing this on our updated website, which she is currently working on. She noted that some members don't use computers or the Internet, so she will still need to bring paper copies of their certificates to the seminars.

#### **U.S. Survey Foot Deprecation**

Mark brought up the topic of the upcoming revision of the standard being changed to The International Foot instead of the U.S. Survey Foot, a difference that comes out to about 0.02' in 10,000 feet. Dan Martin and Jonathan Croft have been working on this change. Mark wondered if VSLS has a position on this issue. Mark says we should be aware that even if the Society takes no part in the discussion, our laws refer to the U.S. Survey Foot. VTrans is taking on the role to change the legislative language. It was suggested that we review the language and write a letter of VSLS support of the new standard by next year.

#### Vermont Survey Law Manual

With the help of a surveyor who is studying for the state exam, Kelly was able to give Keith a scan of the Vermont Survey Law Manual. Keith will convert the scan using a text-recognition program and give Becky a Microsoft Word file for editing. Once this is done, we will give the file to Paul Gillies, so he can update the manual with today's legal standards. Other Business: The group briefly discussed how hard it has been to use the Town Clerk's Offices during the COVID- 19 crisis, since hours are very limited and you need to make an appointment to do research in the Land Records. There being no other business, the meeting was adjourned at 6:39 PM.

Respectfully submitted,

Lisa Ginett VSLS Executive Committee Secretary

#### July 16, 2020, 6 p.m., Zoom Videoconference

Due to the COVID-19 pandemic this meeting was held by Zoom. The meeting was called to order at 6:04 P.M. In attendance were Lisa Ginett, Keith Van Iderstine, Becky Gilson and our Administrator: Kelly Cochrane-Collar. Absent were Mark Day, Randy Otis, Paul Hannan and Nate Yager,

#### **Secretary's Minutes**

As there was no quorum, reviewing the Minutes for the Executive Committee meeting dated June 17, 2020 was deferred until our next meeting.

#### **Treasurer's Report**

Treasurer's report for the period of Jan 1st to July 13th 2020: Due to lack of a quorum, this report was tabled until next month. Keith noted that because there has been no conference revenue, our income is down.

#### **Administrator's Report**

Kelly announced that our Fall Conference will be held by webinar. NSPS has a GoToWebinar membership, which we are able to utilize for free for our conference. Kelly and the Program Committee have tentatively set the rates charged to attend the Conference at \$25.00 per two credits. If someone takes all 12 credits their cost will be \$150.00. The group discussed whether we should attempt to make up for the missing Spring Conference by charging more per credit. We decided not to offer a group rate. Kelly will check to see if we can detect who is attending the webinars in order to verify attendance for credits. There was lots of discussion but no resolution to the various problems created by doing the Fall Conference as a webinar. Keith mentioned that VSLS is taking a financial hit and will have to withdraw some funds from our savings to cover operating costs. Kelly has looked in to providing a website similar to the NYSAPLS portal, where members can see how many education credits they have toward their next licensure renewal period. Kelly is exploring different options to find something affordable that will give us the features we want.

#### Vermont Survey Law Manual

The scans of the main body of the Survey Law Manual have been converted and sent to Becky. She commented that the scan resolution was set too low. She is hoping that most of the errors can be caught through spell check and grammar check. Becky will start the editing process and see how it goes. If it is too tedious she will ask for others to take different sections to check.

There being no other business, the meeting was adjourned at 6:25 PM.

Respectfully submitted, Lisa Ginett, VSLS Executive Committee Secretary

#### August 20, 2020, 6 p.m., Zoom Videoconference

The meeting was called to order at 6:04 P.M. In attendance were Mark Day, Randy Otis, Paul Hannan, Nate Yager, Lisa Ginett, Keith Van Iderstine, Scott Taylor and our Administrator: Kelly Cochrane-Collar. Absent, Becky Gilson

#### **Map Scans**

Scott Taylor attended the meeting to report on great progress made on indexing thousands of scans from deceased or retired surveyors that were scanned at VSLS expense by Dibo and Land Tech. Scott has made great headway in preparing a spread sheet to index the scans. He is using various categories: town, town highway, title of map, surveyor, date, revised date and comments. Scott has combined the two sets of scans and all are now indexed. There are some random plans from various surveyors as well as some Quad sheets and Beers Atlas copies.

The group agreed we should not include the Quads, Beers or random surveyors' maps in the data set as these could create legal issues. There are 40 to 50 maps that have no town names assigned to them and about 15 to 20 other surveyors' random maps included in the scans.

Although Keith opined that we should be able to put up surveys of deceased surveyors, we should not post surveys of anyone still alive but no longer practicing. It was decided after much discussion that we should not include any surveys not explicitly given to the Society. Scott will have all of the scans indexed within a month. A question was asked about the possibility of someone getting the entire set. Steve Frazier asked for and received an entire set. The collection will likely continue to grow. Paul Hannan suggested that we offer an entire copy to anyone who will provide a hard drive for download and pay the cost of time for someone to do the data transfer.

It was decided that if you purchased a hard drive of all of the data you would need to sign a waiver form agreeing to the condition that you cannot sell the data to anyone. We need to create a waiver form for this purpose. It was also discussed and agreed to that Kelly will work on a membersonly section of the VSLS website so that only members can review the Index and ask for the plans that they want to view.

#### **Secretary's Minutes**

As there was no quorum on July 16, we reviewed both the minutes for June 17 and for July 16 at this meeting. The motion was duly made and seconded unanimously: to approve the both the minutes of the June 17, 2020 and July 16, 2020 Executive Committee meetings.

#### **Treasurer's Report**

For the period of January 1 to August 19, 2020: total income is \$28,063.23, total expenses are \$ 30,021.27, for a net income of -\$1,958.04. Bank account total = \$55,356.21. Keith noted that at the time of this meeting, 20 people had registered for the fall conference. VSLS hopes to earn around \$5,000.00 on the conference.

#### **Administrator's Report**

Kelly reports that she needed to change from our merchant account with Union Bank to PayPal, which makes it much simpler to be able to choose individual webinars for the Fall Conference and pay for them. She found that PayPal was much more user friendly and also a little less expensive than Union Bank. Paypal charges 2.9% plus 30¢ per transaction, which could save us a few hundred dollars a year.

Kelly has found NSPS to be very helpful in getting us set up for the GotoMeeting webinars and will have someone listening in to help with technical difficulties should any arise. Joe Flynn and Doug Henson will act as moderators for the webinars. There will be no VSLS business meeting at this conference.

Kelly has printed "The Cornerpost" and will mail it out tomorrow. There was no warning in the publication about a business meeting, so it is just as well that we have not scheduled one. She also asked whether she should send donations to deceased surveyors' requested charities and the group agreed to \$100.00 per surveyor.

We discussed whether to have our December meeting in person. Apparently New Hampshire is planning an inperson meeting to take place soon. There is certainly a question as to how to plan this meeting, which will feature Wendy Lathrop as the presenter. We also had a brief discussion about whether to send out membership cards digitally only, but since Kelly has enough cards for the next two years, the group decided that we will stick with the current system and defer that decision to a later time.

Paul asked if anyone had ever been turned down for membership in the Society and Mark said that we have turned down some requests to join. Partially this question came up in a discussion as to why we have to vote on each incoming member. Keith mentioned that there is always a vetting process for membership in any official group.

#### **Vermont Survey Law Manual**

All sections of the Survey Law Manual have been converted and sent to Becky for editing. So far she has not requested assistance with editing. Once the editing is complete, the manual will go to Paul Gillies so that he can update it.

#### **Other Business**

There have been two complaints of unlicensed practice and Mark will send out emails about the issues and involved parties for us to review. One is against Luke Hart, who works supposedly under the license of Steve Brooks, a surveyor who has lived in Alaska for years.

There being no other business the meeting was adjourned at 6:59 PM.

Respectfully submitted, Lisa Ginett, VSLS Executive Committee Secretary



Executive Committee Meetings are held on the third Thursday of every month. All members are welcome to attend. Email kelly@vsls.org for more information.

#### September 17, 2020, 6 p.m., Zoom Videoconference

The meeting was called to order at 6:04 P.M. In attendance were Mark Day, Paul Hannan, Becky Gilson, Nate Yager, Lisa Ginett, Keith Van Iderstine, and our Administrator: Kelly Cochrane-Collar. Absent: Randy Otis.

#### **Secretary's Minutes**

Minutes for the Executive Committee meeting for August 20 were reviewed. The motion was duly made and seconded and the vote was unanimously: to approve the minutes of the August 20, 2020 Executive Committee meeting.

#### **Treasurer's Report**

For the period of Jan 1st to September 15th 2020: total income for the period was \$34,599.48, total expenses were \$35,151.35, for a net income of -\$551.87. Bank Account Total = \$57,269.42. Keith noted that VSLS earned \$6,159.79 on our first webinar conference. Our only expenses were \$1,200.00 paid to presenter Jim Nadeau and the cost of several gift baskets sent to presenters.

#### Administrator's Report

Kelly reports that comments were pretty much all positive on the webinar conference--better than expected. There were a total of 77 attendees, with 60% completing all of the sessions. The group discussed that it would be good if we had a way to vet the presenters before the program, but as we did not pay any of the presenters except Jim Nadeau, we can't argue too much.

Kelly commented on the high quality of assistance we received from Trish Milburn at NSPS to make certain we had help with any technical details and also help teaching the presenters and moderators how to work the GotoWebinar platform. Kelly commented that the Program Committee is considering having one virtual conference every year, going forward. It might be a good idea to canvass our members to see if that idea would be agreeable to enough people.

Kelly said that we have reserved Wendy Lathrop as the speaker for our December program. She noted that the Capitol Plaza is allowing meetings of up to 75 people, and we could do a partially virtual meeting along with the in person meeting to allow any number of members to attend. Wendy is willing to do an in person meeting or a Webinar meeting. Wendy is from the Chicago area and Mark noted that the quarantining aspect of COVID probably means that having Wendy present in person is not feasible. It appears that the December meeting should be virtual. We also need to think about how to conduct our annual business meeting in December. The committee discussed the possibility of having virtual round tables for part of the December meeting, in the event that Wendy doesn't speak for the full day. The format would not have a true presenter, but someone to start the conversation and keep things on track, more like a moderator. We would probably need 8 topics, and the "tables" would run for a half hour each.

Kelly reported that some states use a members-only website service that costs \$300.00 per month, more than we could afford. She is looking into ways to provide this type of site to our membership, both to allow us to check on our own educational hours and to provide an Index to our scanned maps when it becomes available. Scott Taylor reports that completing the Index will be a winter project for him this coming season.

#### Vermont Survey Law Manual

All sections of the Survey Law Manual have been converted and sent to Becky for editing. Becky says that completing the editing will be a winter project for her.

#### **Other Business**

The group discussed the availability of the fall webinars as future resources for the membership. Apparently they are saved and available on file at NSPS for one year following each GotoWebinar date. We wondered if it would be feasible to download them and have them available on our website.

Mark sent the Executive Committee two plats related to the two complaints of unlicensed practice, which we reviewed. Mark plans to look into the first issue himself, since he knows the person who made the BLA "plat." He would like to see how it got on record before any formal complaint is made. The other issue is with Luke Hart, who puts out rudimentary GPS survey plats under the license of Steve Brooks, who has kept up his Vermont license but has lived in Alaska for many years. It was discussed and decided that the VSLS Executive Committee would write a letter to the Vermont Board of Land Surveyors to point out the issue and ask for their review.

There being no other business, the meeting was adjourned at 7:06 PM.

Respectfully submitted, Lisa Ginett, VSLS Executive Committee Secretary



## VOLUNTEER

Much of VSLS's work is managed by a small group of volunteers. Please give us a hand, even if you have just a little time to spare. Email **kelly@vsls.org** to volunteer.

## 2021 Budget & Officers

## 2021 Proposed Budget

#### Income

Advertising	\$1,000.00
Donations	\$1,000.00
Interest	\$800.00
Membership Dues	\$23,000.00
Program Revenues	\$38,000.00
Publication Sales	\$100.00
TOTAL	\$63,900.00

### **Expenses**

Accountant Fees	\$500.00
Association Dues	\$4,200.00
Bank Fees	\$1,500.00
Donation Expense	\$750.00
Insurance	\$800.00
Memorial Contributions	\$200.00
News Magazine	\$4,000.00
Office Supplies	\$2,000.00
Payroll Expenses	\$22,100.00
Postage	\$300.00
Program Expenses	\$21,750.00
Public Relations	\$500.00
Rent	\$2,150.00
Telephone	\$150.00
Travel	\$3,000.00
TOTAL	\$63,900.00



## 2021 NSPS Director

Gayle Burchard, L.S.

## 2021 Slate of Officers

PRESIDENT	Mark Day
/ICE PRESIDENT	Randy Ot
SECRETARY	Lisa Ginet
TREASURER	Keith Van
DIRECTORS	Paul Hann Rebecca (

Paul Hannan, L.S. Rebecca Gilson, L.S. Nate Yager, L.S.

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## 2021 Program Committee

Doug Henson, L.S. Harris Gayle Burchard, L.S. Aarc David Fox, VCGI

Harris Abbott, L.S. Aaron Fuller, L.S. , VCGI

The Program Committee is looking for new members for 2021. Please contact kelly@vsls.org to join!

## 2021 VSLS Education Foundation Directors

#### MEMBERS AT LARGE

Scott Taylor, L.S. Robert Holt, L.S. Ethan Gilmour, Surveyor in Training

#### **VSLS OFFICERS**

Mark Day, L.S. Randy Otis, L.S. Lisa Ginett, L.S. Keith Van Iderstine, L.S. 

## Windy's Rescue

We were doing a compass and tape survey on a 100-acre parcel of land in Green Bay, Peacham. The parcel is bordered by the Green Bay loop road on the North, and the Red Brook Road on the East and is about rectangular in shape. The work was in the winter.

I had walked the lines the previous Fall so I knew what was involved. John Nagle was working with me, and as always when in the woods, I had my faithful yellow lab with us. Windy was a scout and faithful companion wherever I went. We were working on show shoes, and there was about 18 inches of base snow. Topped by a pretty good crust, and topped again by about 6 inches of powder. Good conditions for snow shoeing. The crust held us up and the new snow gave us traction. Incidentally, I met a man from Maine some years ago that worked as a constructions super in the summer and was a licensed Maine Guide in the winter. He informed me that what I called snowshoe tracks were really "floats" in Maine, and that that was the correct word to use. So, floats it is!

## It wasn't long before we both noticed that Windy was not with us. A call for him didn't produce any results, so we figured he was off on some rabbit or deer trail and would catch up.

We began the work that day by putting John's car where we expected to come out and took mine to the starting area and off we went. It was a cold, clear winter day with the temperature about 15 degrees; a great day to work out in the woods. The first line was along a stone wall, with a lot of small growth along the line. That meant there was a lot of machete work to do to clear the line, so the going was pretty slow. We quit for lunch about noon, built a fire and enjoyed our toasted sandwiches. Believe me, working out under conditions like that, toasting makes a sandwich into a SANDWICH!!



#### by DICK BOHLEN, L.S.#7 (1926-2020)

After lunch we worked our way into more mature growth, so we were able to move along much faster. It wasn't long before we both noticed that Windy was not with us. A call for him didn't produce any results, so we figured he was off on some rabbit or deer trail and would catch up. As we worked our way towards John's car we continued to call for Windy, but to no avail. The daylight began to wane and the temperature began to fall, and we quit the survey work at about 3:30. I told John to continue out to his car and drive around to my car. I decided to backtrack on the floats to see if I could find the dog.

I worked my way back along the line calling for him as I went. No sign of him whatsoever until I got to our lunch campsite. There he was, curled up in the snow. Poor old dog ... he was out of gas ... just couldn't go any further. He was about 12 years old, and believe me, we had had some great times together. He was as faithful a dog as a man ever had! Always with me, lying beside my bed every night for me to step over.

I recall logging on Rocky Ridge in St. Johnsbury. Whenever

I paused to look around, there was Windy watching me and ready for whatever came next. Well, I certainly wasn't going to leave him there to freeze, and the only way to get him out was to hoist him onto my shoulders and start for my car. So, with his 85 pounds on my shoulders, and two legs of his in each hand, I started for the rest and warmth that beckoned to me from my car. The snow crust

was fine to hold us up as we worked the survey, but now I had another 85 pounds on the floats. Guess what: 50 feet on the trail the crust let go and my snowshoes broke through and I pitched forward into the snow. The dog went flying and we were a real disaster! Take off the snowshoes to get them out from under the crust, drag myself onto me feet, dust myself off, put on the snowshoes, wrestle the dog back onto my shoulders and strike out again! Another 50 feet or so, another disaster, another recovery and another start! And that was the way it was for that half mile or so back to the car. I tried making new floats thinking that the crust might hold ... no way, more falls on and on and darkness setting in and temperatures dropping.

Now believe you me, I have worked pretty hard in my day. Working in a hay mow pulling those horse forkfuls of hay apart and mowing the hay away under the eaves, cutting and trimming pine trees, blazing line all day with an axe, and cutting ice on the Handy ice ponds in St. Johnsbury was hard work. None of that compared to that late afternoon in Green Bay. That rescue mission was the hardest work that I ever did. But Windy and I finally made it to the car where John was waiting, and that rest and warmth was just what I needed.

Windy was rescued and spent another six months with me, but Dick was done in!  $\circledast$ 



## December Seminar

### FRIDAY, DECEMBER 11, 2020 | PRESENTED ONLINE WITH GOTOWEBINAR

### Schedule

**8:00 - 11:00 a.m.** Adversity in Action: Understanding Adverse Possession

11:15 - 11:45 a.m. Annual Business Meeting

11:45 a.m. - 2:00 p.m. Lunch/work break

**2:00 - 5:00 p.m.** Disputes Between Adjoining Landowners

NOTE: Webinars will be recorded and can be viewed later.

## **Registration Fees**

Member in good standing of VSLS or kindred society	\$75.00	\$135.00
Life Member	\$56.25	\$101.25
Non-member technical staff (must be affiliated with member)	\$63.75	\$114.75
Non-member	\$125.00	\$235.00

**1 WEBINAR** 

\*Add \$25 late fee after Dec. 4

## Webinars

Adversity in Action: Understanding Adverse Possession All the colorful descriptors for adverse possession (open, notorious, hostile, exclusive, continuous) just scratch the surface of this means of claiming title to land. What gives rise to this claim, how is it pursued, and what is its effect on either clarifying or further muddying the chain of title? Is there a difference between adverse possession claims and trespassing? After examining some history of this doctrine, statutes and case law will help us better understand it and the role of surveyors in supporting or refuting adverse claims.

#### **Disputes Between Adjoining Landowners**

A half-day session on the ins and outs of boundary disputes between adjoiners and the role the professional surveyor should play in those disputes. Surveyors often find there is more than one opinion as to the location of boundary lines between adjoiners. Disagreements and their legally prescribed resolutions are discussed, including adverse possession, quiet title actions, estoppel, boundary line commissions, and agreements.

## Presenter

WENDY LATHROP, president and owner of Cadastral Consulting, is licensed as a Land Surveyor in New Jersey, Pennsylvania, Delaware, and Maryland, and as a Professional Planner in New Jersey. She has a



**2 WEBINARS** 

6 PDH

Master's degree in Environmental Policy and has been involved in surveying since 1974, in projects ranging from construction to boundary to environmental land use disputes. Wendy is also a Certified Floodplain Manager through the Association of State Flood Plain Managers. A former adjunct instructor at Mercer County College in New Jersey, Wendy has taught as part of the team for the licensing exam review course at Drexel University. She has been teaching seminars for surveyors since 1986 and has been writing articles for surveyors since 1983. Wendy is a contributing editor for *The American Surveyor* magazine.

<b>Register:</b>	I will attend:	Both sessions	AM Session Only	PM Session Only
Name			Check enclosed (payable	to VSLS) for \$
Address			Credit card payment:	∕ISA □MC □AMEX □DISC
			Card Number	
Email (required)			Exp. Date	Security Code

Please return form with payment to: VSLS, P.O. Box 248, Montpelier, VT 05601-0248. Questions? kelly@vsls.org





## **SPECIAL THANKS TO OUR SUSTAINING MEMBERS**

When planning for your next purchase, please consider our Sustaining Members, who support VSLS's goals and mission.













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