# Under the Hump

# UPCOMING EVENTS

May 11 meeting at CBMS, 7 pm

- Our annual plant sale fundraiser has begun! Please see page 15 for more info. and use the order form in this newsletter. Orders are due by May 15.
- The VT History Expo at Tunbridge is June 26-27. We are searching for copies of photos of the Bolton Falls Dam along with its history. Contact Don Welch if you can contribute info. and/or volunteer your time at the booth.





# SOCIETY BUSINESS

On May 11th, following the business meeting, members of the Duxbury Historical Society will share personal photographs, anecdotes, (and maybe a few tall tales!) featuring the people of Duxbury. A presentation of old and new photos spanning generations will give the crowd a chance to test their memories and their ability to spot family resemblances. (Do you recognize those ears?) Come prepared to reminisce about days gone by! We encourage you to bring along your own family stories and photos to share!



Vermont History Expo 2010 June 26-27, 10 am-5 pm Tunbridge Fairgrounds

The Vermont History Expo is an exciting and educational way to learn more about Vermont's history and its people. There are over 150 historical societies, museums, and heritage organizations that present exhibits, fun family activities, music, performances, and food. When you visit the exhibits you will meet new people, reconnect with old acquaintances, and learn more about other towns. There is truly something for everyone at the Expo. The theme this year is "Back to the Land Again" and we will be putting together an exhibit about the Bolton Falls Dam. We are searching for copies of photos of the Bolton Falls Dam and its history. If you have photos and/or information to contribute, please contact Don Welch. We are also looking for volunteers to watch the booth on Saturday and Sunday so if you can volunteer even just an hour of time on one or both of those days, it would be most helpful.

Last Issue's Photo: Mark Morse

Being fortunate to have been born and raised in Duxbury, it gives me great satisfaction to take part in the preservation of our Town's history for the benefit of future generations.



UNDER THE HUMP

## SYRUP MAKING



Harvey family sugarhouse and team (photo courtesy of the Harvey family)

### By Maureen Harvey

M any years ago it was quite common for the residents of Duxbury to tap trees that they had on their property and make maple syrup to stock the family pantry with the sweetener. The early method of preparing syrup would consist of tapping the tree with a strike from an ax and placing a trough in the mark made by the strike. The sap from one or more troughs would make its way to a pail for collection. The sap would be collected in pails carried on a yoke and if the snow was deep you made the task easier by wearing snowshoes. If you had horses they would pull a sleigh with a collection tank to make for an easier collection. The sap was delivered to an iron kettle heated by a wood fire to be boiled down to syrup or sugar. These products tended to be darker in color because the imperfections of ash and leaves were not filtered out as they were in later methods.



Davis team (Mac Wilder photo)



Pete Berno collecting sap (Mac Wilder photo)

In January of 1893 the Maple Sugar Makers' Association was formed in Morrisville, Vermont. James E. Crossett of Duxbury was a member of the Association. Their objective was to increase the quality of the Vermont maple products. They considered themselves the best manufacturers of maple sugar and syrup and issued a protected label that was to only be used by the members. The label represented the products that met the association criteria and was "pure and free from adulteration." Each member had to enter into an agreement with the Association Secretary that they would only use it Vermont Maple Sugar Makers' Association Protected Label.



who is a member of THE VERMONT MAPLE SUGAR MAKERS' ASSOCIATION, and has filed a certificate with the Secretary agreeing to use the label *only* upon packages containing Pure Maple Sugar or Syrup of *damhard* weight and quality. Purchasers will confer a favor by reporting to the Secretary any case where this label is found upon a spurious or inferior article. SEC'RY VERMONT MAPLE SUGAR MAKERS' ASSOCIATION, ENSBURGH FALLS, VT.

, 519 KI VERMUNI MATLE SUGAR MAKERS ASSOCIATION, ENOSBURGH FALLS, VI.

Vermont Maple Sugar Makers Association label—1894 (courtesy of George Welch)

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# SYRUP MAKING

upon packages containing pure maple sugar or syrup, of standard quality, of their own manufacture, and the purchaser of the product may be assured of its purity. The improper or unauthorized use of this label or any adulteration of the products covered by the same would be prosecuted to the full extent of the law. State fines started at \$50 and could go as high as \$200 for each offense. These were stiff penalties for a law enacted in Section 1 of No. 81 of the Public Acts of 1884, approved November 25, 1884.

About this time the method of sugaring changed with the use of sap spouts and the use of the iron kettles was replaced by the evaporator. The troughs were replaced with sap spouts that were inserted after a 7/16 hand drill made a hole in the tree. They would tap the spout into the hole and hang a



Dwaine Marshall tapping (Mac Wilder photo)



Ralph C. Davis collecting sap (Mac Wilder photo)

bucket on the hook that was on the spout. A cover was then placed on the bucket so that leaves and other debris would not fall into the sap.

Most dairy farms would tap their maple trees in the spring to make syrup and had teams of horses to transport the sap to the sugar house for boiling. As the years went by tractors would replace the teams of horses. The sugarhouse and evaporators became more commonplace after the turn of the century and were on many of the farms in Duxbury.

The syrup was made by boiling away the water in the sap to concentrate the sugar content and chemical changes provide the characteristic color and taste. Sugar making was part art and part science. The wood fired evaporators are essentially large cooking pans that have channels to send the sap through. The sap enters the pan at one end and will boil and move through the channels to come out the other end as syrup. Although the idea is simple, the execution is where the art comes in. When it comes out the other end the density and color needs to meet grading system criteria. A hydrometer and hydrometer cup were used to measure the density of the syrup to make sure it had the proper consistency. If not done properly the syrup can be burned, have an off-taste from impurities or actually catch fire from the sugar solids collecting and igniting. The sugar maker would actually change the direction the syrup would run to keep the sugar solids (nitre or sugar sand) moving so that they could draw it off. If it was allowed to adhere to the bottom of the evaporator it would burn, explode and catch fire.



Dwaine Marshall boiling sap (Mac Wilder photo)

UNDER THE HUMP

#### SYRUP MAKING



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Robert & Bartlett Sherman's sugarhouse (Mac Wilder photo)

When the sap was running the goal was to get it to the sugarhouse as quickly as possible so that it would not spoil and keep a continuous flow of sap going through the evaporator. Sap is an ideal growth medium for microorganisms because it contains sugars, minerals, and amino acids suitable for microbial growth and reproduction. It takes approximately forty gallons of sap to make one gallon of syrup. Many hours were spent in the sugarhouse when the sap was running.



Donald Merchant boiling sap (Mac Wilder photo)

In the last 25 years one of the major developments in sugar making was the introduction of the pipeline. It enabled the producer to have the sap run from the tap on the tree by gravity to the collection tank or directly to the sugarhouse. This eliminated the need for buckets to be collected and dumped into the collection tank. It is a great savings in labor but the bucket method would allow the sugar maker the opportunity to dump any bad sap so that it would not make it into the collection tank and taint the flavor of the other sap from the other trees. The pipeline was initially done by gravity feed but some operations now use suction to pull the sap to the collection tanks. The days of the hand drill have been replaced by the power drill for producers using buckets or pipeline. Many sugarhouses now burn propane or oil instead of keeping the



Dwaine Marshall's operation (Mac Wilder photo)

wood fires burning.

New techniques for filtration have been added to the process. Some have filtration within the lines that the sap runs through to the collection tank. Others have high pressure systems that process it through filters before it is sent to the evaporator.

Some sugar makers have introduced the reverse osmosis process to eliminate water from the sap before it goes to the



This is a sap pre-processing system that takes raw sap and forces it under pressure through a permeable membrane. Only water can

pass through the membrane thereby increasing the sugar content of the remaining sap. The resulting concentrate must still be processed in a heated evaporator to obtain the characteristic maple flavor. Fresh sap entering the reverse osmosis unit is about 2% sugar. After going through the reverse osmosis unit, the sap may be 4% up to 10% sugar. Raising the sap from 2% to 10% sugar content means removing half the initial water.

Whether the sugar maker is using the techniques of the 1900's or those that are available today most of the syrup that meets the standards set forth by the state of Vermont is considered to be Vermont gold throughout the country.

Many thanks to George Welch for his assistance on this article.



# SUGARING MEMOIRS OF THE WELCH FAMILY



Lois and Ferd Welch with their children, Judith, Carol, Donald, Barbara, and David (Joyce, not pictured). 1946

## By Don Welch

Photos courtesy of the Welch family

F erd and Lois owned two different farms in town during their productive years. From 1932 to 1950, they operated what they called the "little" farm at the end of today's Atwood Road. This 17-head farm was very productive, mostly due to its heavy topsoil which was composed of loam and clay. The westerly edge of the rolling fields was bordered by outcropping ledge. Southerly along this ridge was our sugar orchard.

The sugarhouse was just off the field on a rise south of the buildings. Dad hung 600 buckets on mature maples that stood majestically among the ledges. We gathered the sap with our

team of horses, Mag and Pat, who so honorably served the family on both farms.

During the days of boiling, the sugarhouse became a haven for my siblings and often many friends from the neighborhood. Dad managed this quite well by keeping many cups on a shelf, and as the crowd grew, placed a cup for each in the snow and filled them with syrup. There we sat on the snow bank, chatting, watching the steam rise, and sipping hot syrup—WOW!! At the end of the day, with the syrup drawn off into milk cans, we'd head home, tired, wet and dreary, and wait for the next day the sap would run to do it all over again.

In 1950, Dad and Mom sold the little place and purchased the farm on Crossett Hill quite commonly known as the Jim Crossett farm. This large, hilly acreage consisted mostly of thin topsoil, rocks,

and lots of standing timber so supplementing their income with sugaring was even more of a necessity.

We built a sugarhouse and tapped about all our 3 x 8 evaporator could handle, and went at it. We gathered with our horses even though this orchard would have been perfect for pipeline if the technology was ready. Dad boiled during the daylight hours, while Dave and I did most of the gathering. Unfortunately, I was too old by this time to sit around and drink syrup!

After the sap was in the holding tank, Dave and I usually came down to start milking while Dad continued boiling until dusk, then he would bring the filtered syrup down in milk cans with the team. Then it was my mother's turn (when she had time) to reheat the syrup, grade, and label and can it—then notify their waiting neighbors that their order for new syrup was ready.

By Don Welch





Don Welch

## Preparing the Snow:

Gather the snow beforehand, fill individual pans with snow, well packed. Let the snow sit outside (if cold enough) until time for the party.

## Preparing the Maple Syrup:

Plan on one quart of syrup for six people. Pour the syrup into a large kettle as it can boil up and over the sides very rapidly. Boil the syrup slowly until it reaches about 236 degrees, or until it remains on the snow surface. If not boiled enough, the syrup will penetrate the snow. The syrup can boiled down partially beforehand as it will take some time to prepare.

### Serving:

Serve each person with a snow dish, hot syrup, and a fork. To garnish a sugaring off party, you can serve deviled eggs, sour pickles, and raised doughnuts (without glazing), or any combination of the above. Each person can pour a small amount of syrup over the snow, usually in a trail form, and pick it up with your fork. The sweetness of this waxy-looking delicacy can be offset by the sour pickles.



Mary Ethel Welch

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# SUGARING MEMOIRS OF THE WELCH FAMILY

# By Kelly Welch

Photos courtesy of the Welch family

Don and Mary Welch own 38 acres at the end of Hayes Road on Crossett Hill. They have had a small sugaring operation on their property for 19 years, starting in 1990. Donnie built his sugarhouse in 1990 with the help of his brother-in-law Glenn Ferris. This held a 2.5 foot wide x 8 foot



Welch family sugarhouse

long evaporator fueled by wood Donnie cut from his property. They averaged 300 taps on a pipeline and about 25 taps on buckets. On a typical year they made 35 gallons.

Using the past winter's syrup they would host an annual "Sugar-on-Snow" party for family and friends in their backyard. This was attended on average of 75-100 people who had fun sharing a potluck meal, playing games, and finishing the afternoon with sugar-on-snow from snow that they froze from the past winter. Don and Mary hosted this party for 19 years.

The first years of sugaring was done by Mary and Don alone after work, usually eating dinner late in the sugarhouse and finishing up canning the syrup in the kitchen way past their bedtime.

The past few years I have been able to lend a hand and always look forward to this time of year. My favorite part of sugaring is placing the taps. In the woods with the sun shining, the brook starting to run, and snowshoeing from tree to tree. I would inspect the trees and ready the pipeline while



Don canning in the kitchen



Don tapping a tree

Dad placed the tap. He would tell me endless stories of each tree from years before, and stories of how my grandfather taught him and his brother the art of making maple syrup and different things that had happened to them while they sugared together.

After two knee replacements, 2009 was the last year Don and Mary sugared on Crossett Hill. In the fall they sold their evaporator and other equipment to Zeb Towne, another Crossett Hill resident. Zeb lives off Richardson Road (former site of Jr Clifton's camp). Zeb built his sugarhouse and to date has 380 taps. He hopes to make 100-150 gallons using the pipeline and vacuum system.



Don Welch and Zeb Towne in the Towne sugarhouse

# SWEET MEMORIES

By Julie L. Wilder Photos courtesy of the Wilder family

**S** ome of my happiest Duxbury memories are of spending the last days of winter with my dad and my Gramp and Gram back in the late 1970s and early 1980s. I don't recall exactly what year we began sugaring, but I do remember walking across the road from my grandparents' house with Dad to see Pete Berno about getting some sap buckets. Pete led us up into an attic space where he had them stored, and after prying a few apart he showed me how to hold each bucket up to the light to check for any obvious holes. We hadn't tapped a single tree and I was already captivated.

Dad and Gramp only tapped about 25 trees, but it was enough to delight me. How I loved to hear the steady musical plunk of those first drops of sap hitting the steel buckets!



Mac Wilder tapping a tree



Julie Wilder tapping a tree

It was, I suppose, a ramshackle operation. Out in one of the Grampy's sheds stood our arch-a modified barrel set on its side and cut to fit a rectangular evaporator pan along the "top." There was a door in one end to load the wood in, and a stovepipe on the other end to let the smoke out. It was clever, if not picturesque, and it seemed to do the job pretty well. I didn't have to worry about boiling, at any rate, since my primary duties were to check the buckets and to help gather once they were full.



Francis Sr., Mac, and Mike Wilder



Julie collecting sap



Mac with the gathering tank

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# SWEET MEMORIES

More often than not, one or more of Howard Berno's girls— Heidi, Stacy, and Jaime, along with their shaggy dog, Muffy would come around to check a few buckets with me. Sometimes, if there was a good run, I'd sneak a Dixie cup out of Gram's bathroom and we'd all have a drink of that cold, sweet sap, flecked with bits of bark and dirt. We weren't too fussy about such things.

Dad and Gramp collected the sap in a gathering tank towed behind a snowmachine, which only added to the fun. The burden of boiling off all the sap fell primarily to my father and grandfather, while I blissfully went back and forth, playing cards or checkers with Grammy in the house, and occasionally popping outside to take a deep breath of the sweet, mapley perfume that hung heavy in the shed.



Mac, Julie, and Francis Sr.



Francis Sr. boiling sap



Mac watching the pan

Eventually, the syrup was ready to be brought to Gram where she would finish it off on the kitchen stove. I watched with fascination each time she held up the spoon, waiting for the tell-tale "aproning" effect. Soon enough we had a nice batch of syrup, strained through layers of soft cheesecloth and put up in glass canning jars.

All the while Daddy and Gramp and I had been tapping and gathering and boiling, Grammy and my mother and aunts must have been hard at work collecting pie tins for the sugaron-snow party. We certainly had them in great supply when the time came. The old dining table was set with all sorts of treats: pickles, deviled eggs, and a heaping container of Grammy's homemade doughnuts. In the kitchen, everyone filled their pie plates from a great big pan of clean snow, and then we stood in line and waited as Grammy doled out the hot syrup. What a lovely, gooey, delicious mess.

When everybody had eaten their fill, Grammy would call us kids back to the kitchen and give us each some syrup in a dish to stir with a fork. Once it turned into an opaque paste we dolloped it out onto waxed paper to let it cool and harden into maple candy. In my estimation it was better than Christmas.

I still tap a few of our maples each February–Middlesex trees though they be–less for the fresh supply of syrup, than as a way to tap into beloved memories of the Duxbury people I still hold so dear.



sugar-on-snow party at the Wilder's

UNDER THE HUMP

# CAPTURING A DUXBURY TRADITION

By Julie L. Wilder Photos by Mac Wilder

Over the years, my father Mac has logged a lot of time in Duxbury sugarhouses—from the Marshalls and the Davises in North Duxbury to the Shermans and the Merchants up on Crossett Hill—he has stopped in to have a visit, lend a hand, and take a picture or two.

Dad has loved sugaring since he was a boy, helping out at Burt and Myrtle Cameron's place on Turner Hill in the 1950s when he was 9 or 10 years old. "I used to walk up there in the mornings on the crust, "he remembers. "They didn't plow the road up by Griffiths, so I used to walk up the old Turner Hill Road and go in that way."

It was a fair-sized operation, with about 1200 tapped trees. Mr. Cameron gathered with horses, and my father laughs when he recalls the big dog that would help carry the sap buckets. "You could hand him a bucket and he'd take it in his mouth and carry it for you."

When I ask Dad what he likes best about sugaring, he gives a smile and a shrug. "I like all of it, I guess," he says. "I like everything."



Davis sugarhouse



Wilder sugarhouse



Davis family with their horses, Jute and Blackie



Berno sugarhouse



Marshall sugarhouse

# CAPTURING A DUXBURY TRADITION



Merchant sugarhouse



Donald Merchant and Francis Wilder Sr.



Richard & Donald Merchant



Robert & Bartlett Sherman's sugarhouse: "Shilo"



sign on the "Shilo" reads: This Sugar House was Designed and Built by the Bearded Brothers – R.J. and Pint Sherman 1989

# SUGARING ON WELCH ROAD

#### By Kelly Welch Photos courtesy of George Welch

G eorge Welch has a sugarhouse on Welch Road in Duxbury. He started sugaring in the early 1970s with a 55 gallon metal drum and a stack coming off the side which could be found in his front yard with family helping him attend to the fire.

This family operation continued and as his children grew older, George built his sugarhouse in 1992. On an average year he makes 45-60 gallons using mostly pipeline. His evaporator is run by wood that he mills off his property.

It is an annual event for George and his wife Shari to have nearby school children come to the sugarhouse to see the boiling process. George has built a ramp around the outside of the evaporator that the children can walk and stand on.



Welch sugarhouse

Doing so makes them just the right height to see into the evaporator. These tours are finished with a taste of maple syrup served by Shari.

George usually marks the end of his season when the trees begin to show their buds. There are some sugar makers that make "bud runs" but George says the syrup takes on a different taste and the evaporator and other equipment is much harder to clean after the trees have begun to "bud out."

George's sugarhouse is active today with nearby sons and grandsons who assist him through tapping to clean up. 2010 was marked by a short but sweet season.



George's uncles, Gerald (Bill) Welch and Perley Gonyaw with the 55 gallon drum



George teaching the school children



Shari (background) serving syrup to the school children

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#### SUGAR GRADING

You probably know that Vermont syrup is top shelf syrup but did you know that Vermont has a different grading system than the U.S. system? Vermont's system differs in that it maintains a slightly higher standard of product density. Vermont maple is boiled just a bit longer for a slightly thicker, denser product. The ratio of the volume of sap to the yielded volume of finished syrup is higher in the Vermont system. Maple syrup is sold by liquid volume not weight. The Vermont graded product has one-half percent more solid material and less water in its composition. In Vermont the true quality grade must be labeled on each container. The term Vermont Maple Syrup may only be used for maple syrup produced in Vermont.

PURE VERMONT

PIF SYR

This Syrup is Warranted to be Pure Maple and to contain no substance whatever that was not

MANUFACTURED AND PUT UP BY

H. R. PIKE

Vermont

Net

made from the Sap of the Maple Tree.

Tare

There are three grades of syrup and additional categories within the grades. The most commonly known grades are Grade A and Grade B. Grade A syrup is broken down into three sub-grades: Light Amber or Fancy, Medium Amber and Dark Amber. Grade B is darker than the Grade A Dark Amber. Many people prefer this grade for cooking for its more intense flavor. Grade C is a non-table grade of syrup commonly used for commercial purposes. It is very dark and with its strong flavor it is used as a flavoring agent in other products. The lighter grades are usually from the earlier sap runs of the season with the more intense flavors coming from sap runs later in the season.

Vermont Fancy Grade:

Light amber color. Its unique flavor makes it a favorite topping with many desserts especially ice cream. The preferred grade for candies and other maple specialties.

Vermont Grade A, Medium Amber: A more pronounced maple flavor. It is a great all-purpose syrup but is most desirable for pancakes, waffles, French toast, and cereals.

Vermont Grade A. Dark Amber: A robust flavor with a sweet caramel taste It is an excellent flavoring in many recipes.

Vermont Grade B:

The darkest table grade, a robust maple bouquet. Mostly preferred for the table. Its stronger maple flavor is an excellent choice for cooking.



syrup label from 1980 (courtesy of Kelly Welch)

syrup label from 1920 (courtesy of Kelly Welch)

Vaterbury

Weight.

"Sugaring Breezes" wind from the North, sap flows forth wind from the South, sap flows drought wind from the East, sap flows least wind from the West, sap flows best



page courtesy of George Welch

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Pure Vermont Maple Sugar and Syrup.
Maxims for Maple Sugar Makers.
E IN readiness to get the first run. Have all utensils thoroughly cleansed and scalded.
Employ none but competent and experienced men to tap your trees.
Cut away the rough bark, only, before tapping, leaving bark sufficiently thick to hold the spout firmly to prevent leaking.
The finest flavor and lightest color will be obtained by shal- low tapping.
Gather often, boil at once. Every delay in the process of evaporating sap will injure more or less the <i>auality</i> of the sugar.
Always strain your sap. Use felt strainers for syrup. Boil down to 11 lbs. per gallon ; test by a correct thermometer, and can hot to prevent crystelizing in hortom of the con-
Give full gallon measure and ship only <i>standard</i> goods to your best trade.
Use a reliable thermometer. It is as indispensible in the sugar house as in the dairy.
Use tin or painted buckets and the best improved metalic spout.
The bucket cover has come to stay. Use them, they will save their cost in one season.
Join your State Association and use the protected label, which is shown on third page of cover in this book, upon your
Do not think that you know it all, for maple sugar making is a science about which you may learn something every season if you are observing.

courtesy of George Welch



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If you have any comments or contributions for the newsletter we would love to hear from you.

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Don't forget the next meeting - MAY 11 Crossett Brook Middle School - 7 PM

DUXBURY HISTORICAL SOCIETY NEWSLETTER 1293 RIVER ROAD DUXBURY, VT 05676

