

Maple Syruping and the Weather

Stephen G. Saupe

My wife, Linda, is a weather fanatic. Every morning, soon after she rolls out of bed, she turns on her National Weather Service radio to listen to the robotic voice report the day's weather. She follows that report with a check on our home weather station, a perusal of the weather section of the *St. Cloud Times*, and finally logs onto our computer to read what local meteorologist, Bob Weisman, has to say (www.stcloudstate.edu/weather).

In contrast, I'm just the opposite. My usual philosophy is best

summed up by the old tongue-twister, "Whether the weather be fine, whether the weather be not, whether the weather be cold, whether the weather be hot, we'll weather the weather, whatever the weather, whether we like it or not." This blissfully uninformed attitude toward weather forecasting normally serves me well, except during maple syrup season. That's when you'll find me sitting beside Linda checking the most recent forecast because being able to predict the temperature is important to the success of our maple-syruping operation at Saint John's.

*"Whether the weather be fine,
whether the weather be not,
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whether the weather be hot,
we'll weather the weather,
whatever the weather,
whether we like it or not."*

Sugar maple trees only produce sap when a warm (above freezing) day follows a cold (below freezing) night. Without fluctuating daytime and nighttime temperatures, our buckets and bags will remain bone dry. In our climate, this weather pattern historically occurs from mid-March to mid-April. Nevertheless, we've collected sap as early as February 26 and as late as April 22. As Mark Twain wisely said, "Climate is what we expect, weather is what we get." Consequently, we have two major problems.

First, how do we decide when to tap the trees? Our solution tends to be more labor-dependent than weather-dependent. We generally tap sometime in early March, picking a date that avoids the spring break and Easter holidays to ensure that CSB/SJU students are available to join in the fun. Though we may miss some early sap runs, we reduce the risk of the tap holes drying up before the season is over.

Our second challenge is predicting on which days the sap

Jean Lavigne



Arboretum education coordinator Sarah Gainey (bottom left) helps a group tap a maple tree at the beginning of maple syruping season.

Change is...

Whether you've been reading *Sagatan Seasons* from the beginning, or whether you're relatively new to the publication, change is, well, *different*. Change, however subtle, can significantly affect the look and feel of a publication, and change doesn't always come easily.

As we gently tweak the presentation and layout of the newsletter, we hope you will be candid in sharing what changes you like as well as what changes you don't like. Our ultimate goal is to present you with a newsletter that is as educational as it is enjoyable to read. How well do we meet your needs and interests with *Sagatan Seasons*? What topics would you like to see covered in future issues?

Send your comments and suggestions to Jenny Kutter at jkutter@csbsju.edu or call 320-363-3163. There's no question whether or not she'd like to hear from you.

Interested in volunteering at the Arboretum during maple syrup season?

E-mail
arboretum@csbsju.edu
or call 320-363-3163 to be added to the volunteer list.

Check for regular updates this maple syrup season by visiting our *sweet* Web site:
www.csbsju.edu/maple



Calbe Hymer

In order for sap to flow, daytime temperatures above freezing must be accompanied by freezing nights. So be careful how hard you wish for a full spring thaw this month.

Maple, continued from page 1

will actually flow; when it does, we need a sizable crew to help collect it. Since we cannot control the weather, we once again turn to a labor-based solution. To deal with the unpredictability of the sap flow, we maintain an e-mail list of potential volunteers who spring into action on short notice, heading out to the sugar bush to collect hundreds of buckets of sap. In addition, for every day of the syrup season we have appointed "crew leaders" who are responsible for supervising the volunteers on sap collecting days.

Without such a dedicated and spontaneous crew of volunteers, the weather would have an even heavier hand in our maple syrup than it already does. Even with these solutions in place, keeping track of the weather forecast helps us know when we're especially likely to need help.

Not only do we have to worry about appropriate conditions for sap flow, but we need to keep track of the temperature to ensure that any sap we collect doesn't spoil. Normally, we cook the sap into syrup as soon as we can, especially if the forecast predicts warm, sunny conditions that are ideal for sap spoilage. However, if

the forecast predicts freezing temperatures that will keep microbial growth to a minimum, it buys us a little time before we need to cook the sap. An added advantage is that if any ice forms in the sap it can be discarded. This ultimately decreases our cooking time because when the water freezes it leaves behind a more concentrated sugar solution.

Whether the weather is good for making maple syrup, or whether it's not, there's not too much we can do about it. However, by monitoring the forecast during syrup season as Linda always does, at least we'll be better prepared for whatever conditions Mother Nature throws at us.

Stephen G. Saupe is a CSB/SJU professor of biology but may be more well-known as one of the official "Arboretum master volunteer-guru-maple-syrup-boss extraordinaires." Get in touch with Steve if you have access to an active weather-controlling station that would allow him to continue his "blissfully ignorant" attitude toward the weather throughout maple syrup season.

How's the Weather in Your Neck of the Woods?

Cassie Herbst

The weather, the way we think about the weather, the way we experience the weather, is as fluid and as dependable as the weather itself. Weather observation has been a major part of the public discourse for ages, but here at Saint John's and in backyards around the country, weather observation moves beyond the realm of comfortable small-talk into the realm of science.

Saint John's University was recently presented an Honored Institution Award for 100 years of weather observations in cooperation with the National Weather Service (NWS). For over 116 years, Saint John's University has assisted the NWS, U.S. Department of Commerce, and National Oceanic and Atmospheric Administration in collecting weather data. Beginning in 1892, Peter Engel, OSB, was the first

weather observer at Saint John's, and members of the monastery continue in the task of forwarding daily weather readings to the National Weather Service to this day. Br. Brad Jenniges, OSB is the current weather observer at Saint John's.

The weather observation station at Collegeville is checked at the same time each day and is occasionally visited more than once when unusual weather-related events occur (i.e., you must measure the hail before it melts!). Aside from the routine measurements, Lake Sagatagan is observed in early winter to document ice cover and again in late spring to record ice-out. Br. Brad has compared the task of weather observation to the motto originally descriptive of the postman: "Neither snow nor rain nor heat nor gloom of night stays the [weather observer] from the careful completion of his

appointed [measurements]."

As one of approximately 200 weather stations in Minnesota, the Collegeville station does not forecast the weather but simply records it. The recordings are sent to the National Weather Service to be compiled for use by various groups, including commerce, agriculture, insurance and utility companies, and as of three years ago, the University of Minnesota Climate Center. The information gathered is helpful in determining how weather patterns are progressing and, for example, can help farmers decide when

Routine Measurements at the Saint John's Weather Station:

- Min./Max./Current Temperature
- Precipitation, current & 24-hour
- Times of precipitation
- Depth of snow, ice, and hail
- Fog, glaze, ice
- Thunder
- Damaging winds

Collegeville Notables:

Avg. annual precipitation:
28.66 inches

Highest temperature (July, 1936):
106°F

Lowest temperature (Jan., 1936):
-39°F

Minnesota's greatest monthly
snowfall record:

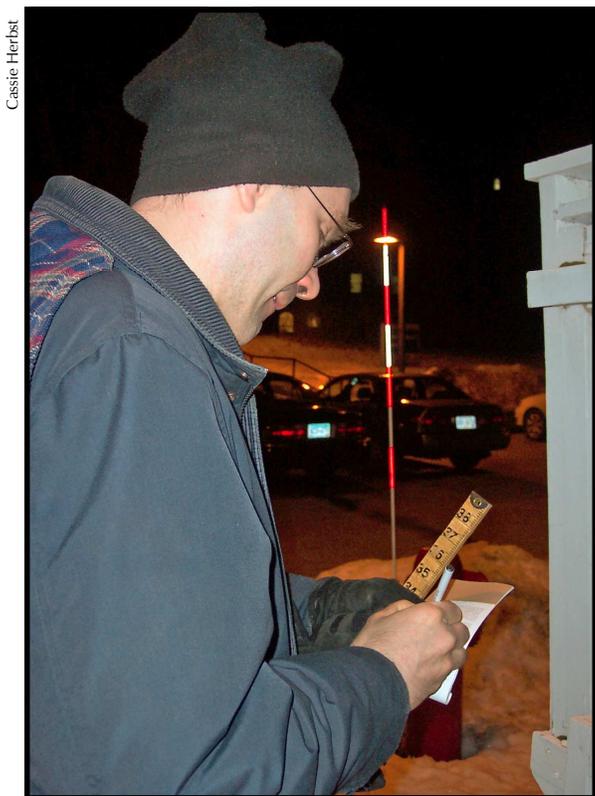
66.4 inches

Collegeville, MN; March 1965
(www.ncdc.noaa.gov)

seeds should be planted or help us know how much energy will be needed to heat and cool buildings at certain times of the year.

Though the weather observation station is not well known in the local community, Br. Brad views the daily task as a valuable community service that is consistent with the Benedictine values of the monastery. While the efforts of a single weather station are simple and humble, the long-term value to the NWS is a dependable and consistent record of weather data. Simple, humble, and dependable—traits to describe both the weather and the weather observers.

Cassie Herbst is an environmental education fellow at the Arboretum. Weather observation is important to Cassie inasmuch as it tells her when to expect the return of the dragonflies.



Br. Bradley Jenniges, OSB, takes the daily weather readings at Saint John's to report to the National Weather Service.

Minnesota Nice vs. the Wild West?

Kyhl Lyndgaard

On a snow-covered road in a remote mountain range that rises to nearly 12,000 feet in the center of Nevada, a pack of hound dogs wearing radios with six-inch antennas on their collars bounded silently towards me and my two hiking companions. They quickly surrounded us. Soon a battered 4x4 with the license plate “El Gato” cranked its way toward the stand-off. Turns out, the driver was hunting mountain lions and the dogs were meant to tree the cougar, while the radios sent signals back to the truck to report their location. Making small talk, I explained that we drove in from Reno, and he dryly asked, “So’s that in Nevada?”

Imagine walking on the Chapel Trail in the Saint John’s Arboretum and encountering, “Minneapolis? Is that in Minnesota?” It wouldn’t happen. The state of Nevada is made up of more than 85 percent public land, yet people still get territorial about their favorite hills and canyons. The whole of Minnesota is actually smaller in size than the public lands in Nevada, so what’s the big deal?

Is this a case of Minnesota Nice vs. the Wild West? I don’t think so. The culture at Saint John’s does not reflect a state or regional affiliation, but rather is informed by a diverse set of local traditions and people. The progressive culture starts with the Benedictine community who shares this land, their heritage of stability tempered by the many generations of college students who have come and gone, supported by neighbors who love their rural homes in the Avon Hills.

On the other hand, much of Nevada remains in a boom and bust cycle that sees intense activity for a while, only to watch the gold



The balance of “usage with exclusivity” gives the Arboretum a sense of hospitality that Kyhl Lyndgaard doesn’t always experience as he explores the public lands of Nevada.

rush end suddenly. So perhaps it is only right that outsiders are warily appraised as potential exploiters. Still, taking the long view requires that we build appreciation for the environment, and one way to do this is through education and hospitality.

It is this that sets the Arboretum’s mission apart. The hospitality integral to every program the Arboretum offers is the best solution to the tensions between “locals” and “outsiders.” Rather than gating the campus and not letting in “outsiders,” thousands of students are bussed in annually for environmental education. Community events like the Maple Syrup Festivals and the Owl Hoot encourage people to walk around campus and into the woods.

While there is something appealing and romantic about being a lion hunter who has lived in a sprawling valley of perhaps two hundred people his whole life, a hundred miles away from the nearest supermarket, the more of us who think that sounds good,

the fewer areas exist for such a lifestyle to be possible. So while El Gato was mostly friendly – by that I mean he called the dogs off – his distaste for having to share the land with outsiders was evident. In contrast, the mission at Saint John’s Arboretum to not only preserve the plant and wildlife communities, but to provide opportunities for education and research inherently invites each person to share in the experience.

Kyhl Lyndgaard is a Ph.D. candidate in literature and environment at the University of Nevada, Reno. His academic writing can be found in ISLE, Green Theory & Praxis, and as part of his forthcoming co-edited anthology on the literature of energy.

Whether or Not...

The business of the Arboretum is filled with tradeoffs that are compounded by the complexity of the systems we hope to manage and protect, as well as the endless opportunities for education, research, and spiritual renewal. What do we gain, what do we give up, and how do we decide?

...to build bridges

Tom Kroll

The Arboretum is made up of bridges: structures as well as trails and educational opportunities that bridge the gap between natural and human systems.

Updating and maintaining the trail system is a constant agenda item for the Arboretum. Whether we're evaluating the need to repair or replace bridge structures within the Arboretum trail system, or studying the costs and benefits of building additional trails to bridge old areas of the trail system with new, we're forced to balance the various tradeoffs of every project.

If you've had the opportunity to walk the Chapel Trail recently, you likely noticed that the Boniface Bay bridge is in need of a few repairs. To improve the trail, should we put resources toward replacing the existing bridge or toward a detour around the bay?

With the completion of the Saint John's cemetery renovation and the widening of County Road 51 south of campus, the Arboretum would like to build an additional trail to bridge the gap between the cemetery and CR 51. New eight-foot wide shoulders on CR 51 will likely increase the pedestrian and bicycle traffic south of campus. A trail bridging Saint John's with CR 51 would be an asset to pedestrians who currently use the narrow CR 159, and the new trail could be built on an existing old roadbed that has overgrown with

brush. New trails are costly to install, require more time and labor to maintain, and require additional resources to ensure people are aware of and utilize the trails. In the end, I think the more "bridges" we have in the Arboretum, the better we will be.

...to do the wild thing

Sarah Gainey

Animals, especially cute and cuddly ones, are often used to invoke strong emotions in people. Environmental educators are no exception. Nature centers, natural history museums, and the like are known to use live animals to draw people into their buildings and programs. Live animals are used to invoke awe and wonder in audiences with the hopes that they will take away knowledge of how to help care for them. This use of "charismatic megafauna," or large animal species with widespread appeal, is common even in Minnesota (think The Raptor Center or International Wolf Center).

Even here at Saint John's Arboretum, we are faced with the choice of using live animals to promote our message of conservation of all native species. But is it worth it?

I struggle with this question of whether we should represent our larger goal of environmental education with an animal or mascot. Having witnessed the awe and wonder on kids' faces when

they have a close encounter with a handled animal, I do acknowledge the power of that interaction. But then I think of the kid who has recently been to the zoo, or a nature center with live animals in their building. When that kid comes to the Arboretum and asks "Where are your animals," the disappointment is evident when we explain that our animals aren't caged or staged and require patience and time to see them. While I feel those places that do use wild animals to promote their environmental message have their place, I am comfortable with the Arboretum being a place that teaches kids how to see animals in the wild. This is a lesson that also includes sometimes not being able to see animals. But the gasps of awe from our students at the glimpse of a wild owl or white-tailed deer tell me it is worth the wait.

Tom Kroll is the Arboretum director and land manager, and Sarah Gainey is the environmental education coordinator. They wonder whether or not Arboretum visitors ever consider them to be "charismatic megafauna."

In Memory of Father Bruce Wollmering, OSB

"Every moment and every event of every person's life on earth plants something in the soul. For just as the wind carries thousands of invisible and visible winged seeds, so the stream of time brings with it germs of spiritual vitality that come to rest imperceptibly in our minds and wills."

—*Seeds of Contemplation*, by Thomas Merton

Jenny Kutter

Father Bruce Wollmering had a manner about him that betrayed his curiosity for the natural world. A man with great passion for the natural world, Fr. Bruce had a deep connection to the lands and landscape of the Arboretum, and we were all saddened upon learning of his sudden death on February 4, 2009.

The first time I met Fr. Bruce was in the garden. What I remember most about that early spring day, aside from the construction of the Abbey's new cold-frame green-

house, was the energy with which Bruce approached the work. That energy and passion was a mainstay in subsequent times I spent with Bruce. In recent years the monastery benefited greatly from that energy with the bounty of fresh salad greens, tomatoes, peppers, or squash that graced their tables. Bruce, along with several other monks, has helped the monastery reinvest in the joy of a local table—the joy that first connected me with Bruce.

Although I first met Fr. Bruce as a gardener grounded in the earth, one of his greatest passions was

with creatures of the sky. An avid birder, Bruce spent countless hours observing, identifying and caring for the winged creatures of the Arboretum. His great love for the Eastern Bluebird led him to establish a trail of more than seventy bluebird nesting boxes within the Arboretum to encourage repopulation of the bluebird.

Fr. Bruce was also very active with the MN Loon Watcher Program. For fifteen years he monitored the nesting pairs and chick success rates for loons in the Arboretum and

reported the results to the Minnesota DNR. He built and maintained loon platforms for Stumpf and Sagatagan lakes that have been used by loons with successful hatches every year.

As an early supporter of Fr. Paul Schwietz in the establishment of an arboretum at Saint John's, and more recently as an Arboretum Advisory Council member, Fr. Bruce's energy is deeply intertwined with our work in the Arboretum.

"Every moment and every event of every person's life on earth plants something in the soul." At the end of each of our seasons, the seeds planted within us will have grown and multiplied to be scattered to the wind. They will settle again to be planted in the minds and wills of those who remember us. Perhaps Fr. Bruce's seeds of passion for each moment that he engaged with pieces of creation planted those "germs of spiritual vitality" that transmitted his curiosity to those who knew him. Fr. Bruce was a good friend, gardener, birder, and enthusiastic Arboretum supporter. He will be missed.

Jenny Kutter is the Arboretum department coordinator.

If you share in Fr. Bruce's passion for birds and would be interested in helping the Arboretum maintain the bluebird trail or loon nests, contact the Arboretum office.



Father Bruce Wollmering served on the Arboretum Advisory Council from 2002-2008. He died suddenly on Wednesday, February 4, 2009.

UPCOMING EVENTS

MINNESOTA NATURAL HISTORY LECTURE SERIES

6:30 – 8:00 p.m., **Third Tuesday every month, Jan – May, Meet at the New Science Center Pendulum**

Interested in learning more about Minnesota's natural world? Join us each month for a lecture and discussion on a variety of natural history topics presented by experts in the field. Lectures will take place indoors and are geared toward an adult audience. All lectures are free and open to the public.

Data Mining in Mud: Exploring the Vegetation History of the Colledgeville Region

The Voices of Minnesota Frogs

Bird Migration in Minnesota

Tuesdays, March 17

April 21

May 19

We'll take a break this summer, but watch for upcoming topics for the 2009-10 lecture series starting again in September.

MAPLE SYRUP FESTIVALS

1:00 p.m. – 4:00 p.m., **Park near Saint John's Preparatory School**

Join us for what has become our most popular event of the year! Sap collecting, syrup cooking, horse-drawn rides, demonstrations, and hot maple syrup sundaes await the whole family during this fun-filled event! Cost is \$3 for adult Arboretum members, free for child members; \$7 for adult non-members, \$3 for child nonmembers (ages 4-17, children 3 & under are free). Preregistration is preferred but not required. Receive \$1 off each person (up to \$10) if you preregister by the Friday before the festival you are attending. Contact us to preregister or use the online form on our Web site.

Saturdays, March 28

April 4

SCOUT DAY AT THE MAPLE SYRUP FESTIVALS

New opportunity this year for scout groups! Preregister for one of the festivals, then complete a list of activities at the festival as a group. Participating groups who complete the activities will receive a Saint John's Maple Syrup patch! Costs are the same as listed under the Maple Syrup Festivals, and scout groups **must pre-register** to participate in the program. Contact us to pre-register or use the online form on our Web site.

Saturdays, March 28

April 4

EARTH WEEK 2009

Celebrate Earth Week with Saint John's Arboretum! We'll have a variety of events throughout the week, so watch your e-mail and check our Web site for your opportunities to celebrate!

April 19-25

Earth Day: April 22

6TH ANNUAL PLANT AND GARDEN TOOL SALE

8:30 a.m. – 12:00 p.m. or until sold out, **Pendulum in the New Science Center**

Welcome spring by stocking up at our annual plant and garden tool sale. Arboretum members receive 50% off on all items. Memberships are available for purchase on the day of the sale.

Saturday, May 9

SPRING BIRDING DAY

5:00 a.m. – 1:00 p.m.; 8:00 a.m. – 1:00 p.m.; or 1:30 – 4:30 p.m., **Peter Engel Science Center Room 269**

Spend a morning hiking through the Arboretum woods with birders during peak migration. Early risers will be stunned by the abundance of birds active early in the day. Coffee and rolls will be served at 8:00 a.m., lunch and compilation of the bird lists at 12:00 p.m. New this year: join the Minnesota Ornithologists Union to continue the tour in the greater Avon Hills area in the afternoon. Cost for either morning session is \$12 for Arboretum members; \$16 for nonmembers. There is no fee for the MOU tour in the afternoon. Preregistration preferred. Contact us to preregister or use the online form on our Web site.

Saturday, May 9

*To volunteer, register, or get more information about Arboretum events,
please call (320)363-3163 or e-mail arboretum@csbsju.edu.
Don't forget to check out our Web site at www.csbsju.edu/arboretum*

Arboretum Staff:

Thomas Kroll, *Director/Land Manager*
Sarah Gainey, *Assistant Director/
Environmental Education Coordinator*
Jenny Kutter, *Department Coordinator*
Cassie Herbst, *Environmental Education Fellow*
Jenni Poliseno, *Environmental Education Fellow*
Dan Vogel, *Forest Technician*

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Seasons

THE NEWSLETTER OF SAINT JOHN'S

Arboretum

SAINT JOHN'S ABBEY AND UNIVERSITY

Spring 2009



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Sweet. Literally.



Ken Bachofer

Maple Syrup Festivals

Saturdays, March 28 & April 4
1-4 p.m.

Saint John's Arboretum encompasses the lakes, prairie, oak savannah, and woodland in the 2,740 acres surrounding Saint John's Abbey and University.

Our Vision
Saint John's Arboretum celebrates the unique beauty and richness of God's creation in central Minnesota and fosters the Benedictine tradition of land stewardship, education, and environmental respect.

- Our Mission**
- Preserve native plant and wildlife communities of the Arboretum lands
 - Provide opportunities for education and research
 - Model practices of sustainable land use
 - Make accessible a natural environment that invites spiritual renewal

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Saint John's University
Collegeville, MN 56321

SAINT JOHN'S ABBEY AND UNIVERSITY

Arboretum



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