

Visio Naturae

Jim Poff

I often look at flowers, or leaves, or insects on those flowers and leaves. Most often I do so quickly, in a cursory manner that does not necessarily help me understand the organisms or the interactions that I am seeing. I can walk through a piece of prairie or woodland and recognize one species after another, usually without really paying them the attention that they deserve.

An important part of the daily rhythm of the lives of Benedictines is the practice of *lectio divina*—a slow, contemplative reading of a text that deepens the understanding of the text and its meaning. Perhaps a parallel practice of *visio naturae*—a close, reflective looking at plants, insects, and other organisms, will deepen our appreciation and understanding of the natural context within which we all live. And just as oral reading is a practice that facilitates our interaction with the written text, drawing is a practice that directs and focuses our visual examination of the natural world.

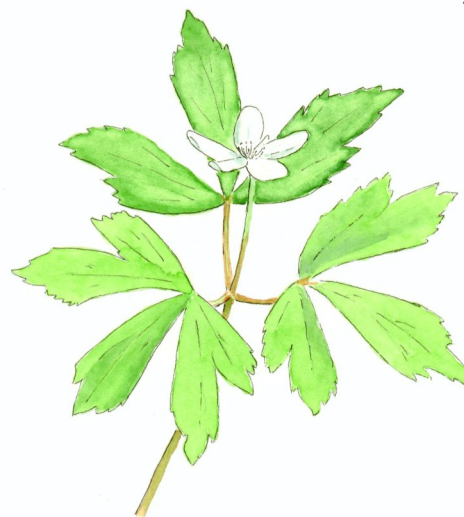
During spring 2013 I taught a one-credit course called *Biological Illustration*. In this course students worked to learn a variety of rendering techniques and close observation of natural subjects to create detailed illustrations. In the context of the course most students created artwork that would eventually be used in traditional text formats, for example, as a series of illustrations in a lab manual or field guide, or as illustrations for a poster.

Hopefully their art will enhance



Jim Poff uses drawing to practice what he calls *visio naturae*—a close, reflective looking at nature. Teaching and learning how to capture accurate biological illustrations also provide opportunities to (re)discover the outdoors.

Above: Jack-in-the-pulpit (*Arisaema triphyllum*).
Below: Wood anemonie (*Anemone nemorosa*).



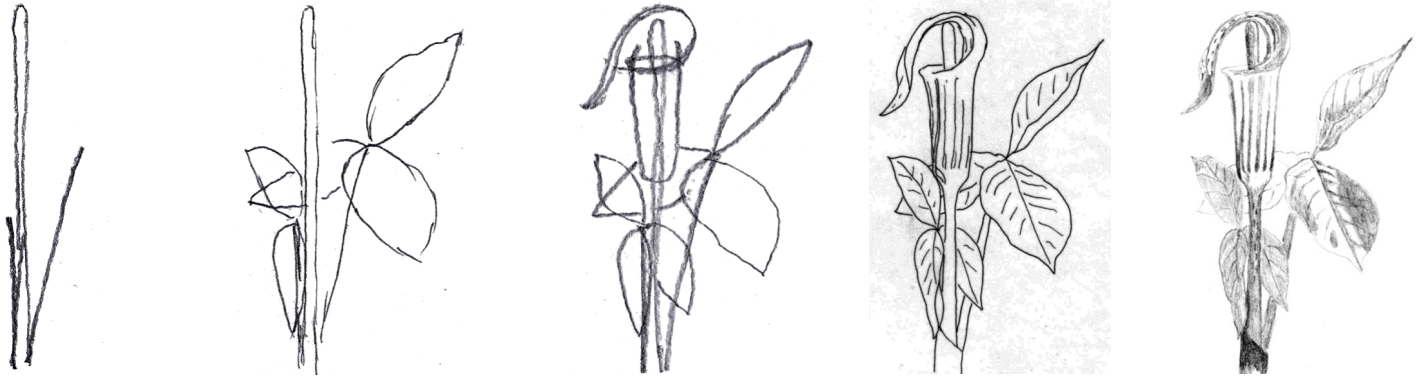
the understanding of some future audience. However, the close observation and techniques used for capturing accurate biological illustrations should also provide an opportunity for (re)discovering the outdoors—seeing things for the first time, seeing them in another way, or perhaps seeing new detail that gives a deeper insight into the workings of nature.

The major value for me of taking on the spirit of an illustrator and drawing or painting nature, instead of just looking at it, is that it forces me to slow down and observe closely. I have found that just the act of considering the drawing process when looking at that flower (or leaf, or insect) provokes an entirely new line of questioning for me, and those new questions inevitably lead to a whole new set of observations.

Instead of asking “What type of flower is that,” I ask “How would I draw that?” This question causes me to examine more deeply, to look anew at shapes and shadows and relationships. I begin to see and appreciate a level of complexity that I hadn’t before. I begin to see that plant as a real physical individual that has all kinds of features that make it unique and interesting.

Visio naturae can be translated as “a view of nature,” and the sense in which I use it is to be a reflective view of nature. As I approach drawing, I do so with the attitude that I want my art to tell something true about the subject being drawn. Exactly what that truth is may vary with the subject, with the rendering

Drawing, continued on page 2



Beginning with simple contours and gradually progressing to more detail, Jim Poff demonstrates some techniques used to draw two native woodland flowers: a Jack-in-the-pulpit (above) and a Wood anemone (below). Illustrations by Jim Poff.

Drawing *continued from page 1*

technique, or with the audience that views the work.

In order to practice *visio naturae* we need to have a few simple tools and a willingness to slow down, observe carefully, and draw or paint what we can actually see, not what we already think we know. As we make drawings in our journals we will discover that they get better with practice. We will also discover that with practice we can more easily see those details which inform our understanding and help us to interpret the organism and its role in the natural environment.

To make a drawing one should first look carefully at the subject from several different positions. Realize that different views provide different perspectives and different amounts of information.

After checking out the various views, select one that gives significant information, and begin to make your drawing. I recommend making an initial simple contour drawing that captures the basic shapes of the subject. Once the contours are

drawn accurately, begin to refine and add details.

If you make your initial drawing with light marks you can draw over them to do your refinements. This same basic beginning can be used whether you eventually want to have your final drawing in pen and ink, pencil, or watercolor.

While you cannot spend all of your time observing nature in this way, doing it for short periods of time on a regular basis will teach you much about nature and perhaps about yourself.

Dr. Jim Poff is a professor of biology at CSB/SJU. He will be teaching a three-session class at the Arboretum on drawing and watercolor for nature journals in September.

I Take a Child Into Wilderness

Invented words
are bread crumbs
toll'd away by ravens.

A compass explains
the way out
is not the way in.

Follow wolves to the thicket
where broken bones
will show their marrow.

Eat wild roses raw
until your appetite
is woken for radiance.

The map tells us
there is no way out.

All words are invented,
cast toward the sun.

—Ryan Kutter



Planning to Discover

Daniel Wattenhofer



Ben Schwamberger (front left) and fellow CSB/SJU students on the Austria study abroad semester pause for a group photo during a tour of the Black Forest region of Germany.

Benjamin Schwamberger

Think of Austria and many of our minds go to *The Sound of Music*. But for almost four months this past fall I met a very different Austria, one that would not only change my perception of the country itself, but also of my home here at Saint John's.

I come from a fairly outdoorsy background. I was an active Boy Scout, grew up near many lakes and woods, and have been in and out of the Abbey Arboretum many times. Naturally, I wanted a study abroad experience that would give me a sense of nature and exploration.

I had been to Europe before but was not very familiar with Austria. When I saw that Arboretum director Tom Kroll would lead the Austria program with an environmental focus, I knew this program was the one for me. With a little research I found that Austria is home to some of the most beautiful landscapes and amazing outdoor hiking and traveling opportunities. I was sold.

When we arrived in Austria, Tom handed us our bus passes and told us "Viel Glück!" (Good luck!). Little did I know at the time, but this bus pass was my key to discovery:

finding some of the coolest parts of the city, the country, as well as the rest of Europe. The lesson here was not just figuring out this new system (in a new language), the lesson was in learning how the system would help me explore.

I was prepared to speak a little German while abroad, and did an alright job at reading the street signs, but I had not practiced for the whole summer, and suddenly I had people asking *me* if this bus stopped at Justizgebäude. Over time, things became easier to do, and I became confident in my ability to navigate Salzburg as well as any other European city.

The second big lesson caught me a little by surprise. Tom taught us about the Incident Command System (ICS) used by the U.S. Forest Service. The ICS sets up a chain of command and clear lines of communication among the four main divisions to any successful event— planning, logistics, operations, and finance.

Used by the Forest Service when responding to forest fires or other natural disasters, the ICS initially sounds dry and cumbersome for a group of college students studying abroad. But when planning an event

for class, or working on travel plans, it was actually pretty handy.

A group of us decided to travel to five different countries over the course of our Thanksgiving break, and the ICS allowed for us to sit down and systematically plan our trip. Making a circle through Germany, France, Switzerland, Italy, and then back to Austria, we found we were able to spend more time hiking the snowy Alps in Interlaken, Switzerland, and relaxing on the beaches of Nice, France, because we had made a plan ahead of time. The ICS was a great, systematic tool for managing our trip, and it made the entire journey easier and a lot more fun.

Having a plan is great, but Tom also taught us that the key to an *even more successful* plan is knowing when to leave it. No matter how much we plan, outside forces can always interfere. A person might learn this acutely by missing the last train back to Salzburg and posting up in the train station for the night (I'm just saying...). The trick is to be able to devise a new plan.

These lessons were among some of the most rewarding experiences in Austria. Not typical classroom lessons, they allowed me to experience Europe, and now anywhere I travel, in a new way. But they also changed how I experience home.

Whether learning "Prost!" and other "necessary" German phrases, hiking the mountains near Salzburg, or disc golfing in the Abbey Arboretum this summer, my definition of discovery and adventure has been radically changed. I am ready for anything. Viel Spaß!

Benjamin Schwamberger is a senior philosophy major at Saint John's University. Ben, Tom Kroll, and student naturalist Alex Van Loh all traveled together in Austria, and the rest of the Arboretum staff can't understand a word they're saying.

Jenny Kutter



Student naturalist Kate Delfs counts tree rings with a group of preschoolers.

Jenny Kutter



How many kindergarten hugs does it take to measure your biggest tree?

Sandra Cordie



A fallen log provides a perfect spot for a student to record reflections in her nature journal.

Katelynne Delfs

Be safe. Have fun. Learn lots.

Those are the rules.

You have probably seen student naturalists working at the Avon Hills Conference or the Maple Syrup Festivals. We love to help at community events, but really seeing us in action you'll find that our true passion is with the kids. You might stand in the serenity of the forest and see a teetering oak or a birch tree. Our students tromp through collapsed portals to Narnia and cross fallen log bridges made for squirrels.

Kindergarten hugs

In kindergarten the focus is on trees. After having an embarrassing one-sided chat with a tree that won't tell me its birthday in front of the class, I explain that we actually count tree rings to know how old trees are. But our favorite method for measuring trees is the scientific unit of "kindergarten hugs." [Cue: "Aww."] How many students does it take to encircle a tree? How many Abbey Arboretum trees are "4 hugs" big, or more?

A scientific word for animal poop

My favorite part is seeing what each student brings back from sensory exploration—searching through the prairie for items that stimulate the senses. Even when the early spring prairie appears brown and dry, they manage to find fluffy milkweed seeds and sparkly rose quartz to study. Even animal scat gets collected (as chaperones quickly dig out the hand sanitizer). "Do you know the scientific word for animal poop?" I often ask, trying to make this a teachable moment. In one instance, a kindergartener protected his find from others shouting, "That's my turd; go get your own!"

Cuter than my brother

These comedic moments are not rare. With winter lasting through May this year, we've had several classes meet for stations indoors. Instead of exploring the prairie covered in snow, we can choose our favorite preserved animals from the Natural History Museum or we can go outside to build snow buddies covered in seeds for the animals to eat. I often teach a station on owls where young students can see talons or pellets to learn what makes owls such great hunters. The soft, silent, and strong owl feathers delighted one young boy. "Someone tell the tooth fairy I want one of these under my pillow instead of money." Another classmate remarked, "That baby owl is cuter than my brother!"

You said science class, not gym

Even on the nice days, the elementary school students can grow tired while exploring the Boardwalk Loop. One moment we're catching insects in nets under the hot sun, and the next they're complaining, "You said science class, not gym," as we continue to hike the Boardwalk Loop. After a friendly reminder to keep watch for nearby garter snakes, the tired students quickly forget about approaching lunchtime once more.

The magic of the hunt

I once prompted a rogue group of second grade boys to search under logs for blue spotted salamanders that love shade and eat sinister centipedes. Regrettably for me, the first log they haphazardly kicked to overturn yielded a salamander and the magic of the hunt was lost. "These are my favorite. We never find these," I cried. But the boys were off to look for turtle eggs while the exotic-looking salamander tried to bury itself between my fingers.

Fun. Learn Lots.

You can't see God

As we pass cattails in the boardwalk, the children always reassure each other that they are not actually made of cats. "Are there any fish in this water?" a student asks as we pause near Watab creek in the wetland. "I don't see any. But..." after some thought he continues, "You can't see God and he's still there." That is some powerful insight from a student who has been around fewer years than the elusive fish he is seeking. I point out the Trumpeter swans whose entire necks disappear as they search underwater for lunch, and keep my students moving toward the bus.

The local hero

There's nothing quite like supervising squealing preteens while they pluck earthworms from the mud to learn more about Minnesota's invasive species. I can get city girls to dig in the mud while wearing colorful skinny jeans, perhaps because I can empathize. I was raised a city girl but chose to attend Saint Ben's for the unique setting and acreage surrounding these campuses. Before becoming a student naturalist I had never been camping. Now I can explain the principles of *Leave No Trace*, and know how to make a fire without matches or newspaper. When students scream and move away from their macro-invertebrate trays of wetland insects, I am the local hero running toward the scene to discover the species of the uncovered monster. "Oh, this is a dragonfly nymph! Watch this." I try to demonstrate how they can extend their jaws to catch prey or use jet propulsion to rapidly swim through the water.

What if seeds looked like butts

When students leave at the end of a field trip, I hope they know where ticks like to hide and that they are

arachnids and not insects. I review that hitchhiker seeds love to stick on your clothes and that galls look like seeds but they are actually insect homes. These get my little inventors thinking about ideas more sophisticated than Velcro or robots. "What if seeds looked like butts? Then you would sit on them and transport them. They would fall off somewhere far away, and you would never know."

Do you believe in zombies

While we're far away from the noisy highway, buildings, and classrooms I (inevitably?) get asked, "Do you believe in zombies?" Well, no. Unless you've been watching TV for too long and have forgotten what the sun looks like. You won't find any nature-deprived zombies here in the Abbey Arboretum. Even my new students who have never heard of camouflage can find a tree frog clinging to a branch if they have time to look. It just takes practice and a little encouragement from your friendly Arboretum staff. That's what we do.

Tastes like happiness

Now imagine you're a squeaky mouse, and I'm a hungry, hungry owl. Where would you hide? What would you find? Put yourself in the mindset of a student who thinks every animal can devour humans and every woodland flower probably tastes like happiness.

Katelynne Delfs is a 2013 graduate of the College of Saint Benedict with a Bachelor's degree in biology. A seasoned, passionate, and energetic naturalist, Kate will be missed by students and Arboretum staff alike.



Ben Schwamberger

A forest scavenger hunt might not reveal any zombies, but you might find a shy salamander.



Ben Schwamberger

Kate Delfs squeezes herself between students dipping on the wetland to see what they found.



Ben Schwamberger

Students engage student naturalist Kate Delfs in an energetic conversation about forest habitat.

I Had Forgotten...

Karen Bengtson

As I trailed behind the elementary field trip group climbing a small hill in Saint John's Abbey Arboretum, a very loud "rap-it-tat, rap-it-tat-tat" sounded just above our heads. Giggles and squeals came from the group as they simultaneously ducked and turned towards the large tree from which the sound came.

"What was that!?" and "Do you see it!?" were among the exclamations from the group in the following moments, with hands pointing and heads tipping to spot the noisy tree dweller. The rap-tapper had captured the attention of all the members of the group, the youngsters as well as the chaperones – Arboretum staff, volunteer parents and my college students – who were helping with the field trip.

The delight on the adults' faces was just as bright and jubilant as that on the elementary students'. They had questions, recalled they had heard that sound when they were growing up, and a few proudly shared that they knew what might be making the racket (a Pileated woodpecker). Even now I ponder who was more impacted by the natural occurrence, the elementary students or the adults.

Each semester I work to incorporate an arboretum field trip experience into my science pedagogy course for students who are working towards becoming elementary school teachers. The students volunteer to help with at least one group of area elementary students when they visit the Arboretum, and they reflect on the experience as an educator instead of as a participant in a field trip. Invariably, when we debrief these experiences in my classroom, the college students are visibly excited by their experience in many ways.

Their focus starts off speaking of

the elementary students, how well they behaved, and how engaged everyone was outdoors. But they also share stories of the events and places they experienced while helping the youth with their activities and trekking to different places. Comments range from "I had forgotten how fun it is..." to "as a kid I had always loved going..." making the teaching and learning experience that much richer and memorable.

Most of my students confidently exclaim that they plan on taking their future students outdoors, as it is such a rewarding learning experience, but in the same discussion say they have not done something like that since they were children. I am hopeful they will use outdoor spaces in their teaching, but I am also struck by the fact that they haven't experienced it more.

"I had forgotten..." is such a powerful reflection. I hope that more than just my students and the field trip chaperones are reminded of what they may have experienced outside. I hope that they rediscover what they already know to be out

there. It may include the investment of time to take a field trip with a classroom of eager young students, or it might mean taking simple steps to walk purposefully through a natural area on the way to or from work. It does take time, occasionally a few more supplies and a bit of planning, but the rewards are so great in the experiences and connections to the natural spaces we often pass by every day unnoticed.

The visible positive effects of just recalling and recounting an outdoor experience are worth the effort and can forge connections between people as well as outdoor spaces. "Did you see it?" and "I remember when..." forging bonds between people and places, between now and then, between you and I.

Dr. Karen Bengtson is an assistant professor of environmental and science education at CSB/SJU. She and her students regularly collaborate on Arboretum preK-12 field trips.



Ben Schwanberger

College students training to be teachers gain valuable experience helping on Arboretum preK-12 field trips. They join the visiting youth in (re)discovering the excitement of exploring outdoors.

We're Getting Our New Name!



Jenny Kutter

Ideas have been submitted. Lists have been made. Names have been added, crossed off, and added again. We've banged our heads against the wall, thrown darts, and argued for and against dozens of suggestions. We're almost ready. Our educational reach has grown

and expanded to be and do more than we could have imagined when our program was created sixteen years ago. We hope our new name will better describe who we are and what we do – in the Abbey Arboretum, at the University, and in the community.

Watch for an official name unveiling later this summer.

UPCOMING EVENTS

Summer Library Programs

Free and open to the public

Dates and times vary

June 16 – August 16

In conjunction with area public libraries' summer reading program, Saint John's Arboretum is bringing our *Soil Rocks: Can You DIG It?* program to a library near you! We're ready to give you the dirt on what is going on beneath your feet through games, stories, and hands-on activities!

Programs are currently scheduled at:

Albany	Hinckley	Staples
Cambridge	Monticello	St. Cloud
Eagle Bend	North Branch	Waite Park
Elk River	Pierz	And MORE!

Collegetown Kidstock

Friday, June 21

Featuring The Okee Dokee Brothers

4:30 – 7:30 p.m.

\$10 per family, suggested donation

Celebrate the summer solstice with The Okee Dokee Brothers and Saint John's Arboretum! Enjoy a variety of outdoor activities, including canoeing, a bonfire with s'mores, educational tables, and live music leading up to The Okee Dokee Brothers performance at 6:00 p.m. Bring a picnic supper, or purchase food from the Saint John's Parish Center at the event.

The Okee Dokee Brothers are a singer-songwriter folk-duo, writing "kindie" songs encouraging kids and families to get outdoors! Their album *Can You Canoe?* won a Grammy for best children's album in 2013.

For more information about Arboretum events, please call (320) 363-3163 or email arboretum@csbsju.edu. Find us on the web at www.csbsju.edu/arboretum.

11th Annual MN Martin Fest

Free and open to the public

\$10 – Lunch

Saturday, June 22

8:30 a.m. – 2:00 p.m.

Interested in learning more about Purple martins in Minnesota? Come see a variety of speakers and demonstrations on Purple martins, Chimney swifts, Eastern bluebirds, and more. Vendors will be on site with Purple martin housing and landlord supplies. Hosted by the Minnesota Purple Martin Working Group and Saint John's Arboretum.

Nature Journaling:

Drawing To Learn

\$30 – Arboretum members

\$40 – Nonmembers

plus materials (a materials list will be provided)

Tuesdays, September

3, 10, & 17

6:30 – 8:30 p.m.

This is a basic introduction to drawing and watercolor techniques that are useful in recording observations in a nature journal. Observation is a talent that involves many skills; and like most skills, observational skills can be improved with practice. The intent of this course is to introduce you to some tools and an approach to help you observe the natural world. There will be guidance and practice that will help make you a better observer of nature.

Minnesota Natural History 3rd Monday each month

Lecture Series

Sept.-Nov. & Feb.-Apr.

Free – Students (any age) & Arb members

6:30 – 8:00 p.m.

\$5 – Nonmembers, nonstudents

Interested in learning more about Minnesota's natural world? Join us each month during the school year for a lecture and discussion on a variety of natural history topics. Lectures take place indoors. Check our website to see some of last year's topics and to see updates to the 2013-14 lecture schedule.

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 Sarah Gainey, *Assistant Director/*
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Environmental Education Coordinator
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SACATAGAN
Seasons

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In this Issue...

- *Visio Naturae*..... p. 1-2
- Planning to Discover..... p. 3
- Be Safe. Have Fun. Learn Lots..... p. 4-5
- I Had Forgotten..... p. 6

Our Mission

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

Our Vision

We celebrate the unique beauty and richness of God's creation in central Minnesota and foster the Benedictine tradition of land stewardship, education, and environmental respect.

Saint John's Abbey Arboretum encompasses the 2,830 acres of lakes, prairie, oak savannah, and forest surrounding Saint John's Abbey & University.

**COLLEGEVILLE
 KIDSTOCK
 2013**
JUNE 21 | 4:30-7:30PM
**A FAMILY FRIENDLY
 SUMMER MUSIC FESTIVAL
 IN THE ABBEY ARBORETUM**
\$10 per family, suggested donation

Featuring Grammy-winning Folk Duo:
THE OKEE DOKEE BROTHERS

