April 1, 2024

Special points of interest:

- A Past President of the ACS
- Why do some cultivars have "Garbage" names?
- In honor of Easter, I briefly mention a Pope.
- What is Amore?
- There is a simple reason many parents of non-academic students have little high school involvement.

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Fact 1: You cannot touch your lower lip with your tongue.
Fact 2: After reading this.



HAPPY APRIL FOOLS' DAY

Naming Cultivars

When a person purchases a plant from a nursery/garden center, it will have a name attached to it. That name may or may not tell the customer how the plant will grow. For example, a plant sold under the name of Dwarf Mugo Pine, says next to nothing about how the plant will grow. It is a catch-all name used when the nursery grows mugo pines from seed and shears them all to the same size. Upon closer reading of the label, a scientific name might be seen: usually, Pinus mugo var. pumilio. The var. stands for variety (more on that later).

However, if the customer purchases a mugo pine that is labeled something like *Pinus mugo* 'Little Delight', they know exactly how this plant will grow based upon the name in the single quotes (the cultivar name).

Another name the cus-

tomer might come across, especially if they are purchasing a pendulous form of spruce is one written as Picea abies f. pendula. This designation with a name means this plant will grow with a pendulous habit, but the exact shape is uncertain. If the plant is named Picea abies 'Pendula', it implies that the exact form is known and that it came from a single, known mother plant, but that is not the case (more on that later). It is incorrectly named when the cultivar designation ('Pendula') is used for this plant.

At this point, before I cause too much confusion to the reader, let me define these terms: cultivar, (trademark and patent), variety, and forma.

A common definition for cultivar is a plant that has been selectively bred or cultivated by humans to enhance certain characteristics, such as color, shape, or disease resistance. Cultivars are always propagated asexually from cuttings, grafts, or tissue culture (micro cuttings) so that the desired traits are retained. The seeds of a cultivar will not produce plants identical to the parent, although one may show up in a large batch of seedlings.

A plant becomes a cultivar when it differs from the species in one or more attributes and has garden merit. It may be found growing in the wild or created through human intervention (hybridizing comes to mind). Any naming g must be considered provisional until the plant has been propagated asexually and the offspring are identical to the original plant. The name must be written after the genus and species designations and placed inside single quotes and capitalized. The name must be what is

Page 2



Top: <u>Pinus mugo</u>

'Little Delight'

Below: <u>Picea abies</u>

f. pendula



Naming Cultivars cont.

referred to as a fancy name, not Latin or Greek like before 1958. It should also avoid titles like Mr. or Dr. or Mrs., etc.

A cultivar name is permanently attached to a plant when it is published with a description in a dated publication such as a book or catalog. It is also permanently attached if it is registered through an international registration agency like the Royal Horticultural Society. In the conifer world, most collectors/propagators do not work with the registrar and assign names, relying on other people to keep that name on the plant when it is sold or shared. I know very few instances where a plant was renamed after it was shared. However, that could easily happen if the rules for naming are not followed.

Trademarks and patents are commonplace when big growers are involved and affect the financial aspects of working with conifers. I knew I had a great plant when I worked with *Picea abies* 'Gold Drift'. I never considered patenting the plant or trademarking the name for several reasons. Most importantly, I wanted

it to be freely shared throughout North America and Europe without any restrictions. Financially, I knew I could make some money through regular sales for five to ten years after I introduced it since I would be the only source.

Since I was evaluating the plant for almost ten years before introducing it, I was able to build a nice inventory and had good availability when I released it. The financial investment to patent it and then to enforce the patent would make it a financial loser and give me premature gray hairs. If I was a large grower, I might have done it differently.

Let me expand a bit on plant patenting and trademarking.

A plant trademark is something that only protects the trademarked name. The symbol, TM only indicates that a trademark is applied for, it is not yet enforceable. The symbol ® means the trademark is registered and no one can use it without a license from the owner of the trademark. It must be different than the cultivar name since the cultivar name must be available for

free individual use.

A trademarked name cannot be the same as a cultivar name or it is invalid and the ® must follow the actual trademarked word(s). Many growers avoid confusing trademarked names and cultivar names by using a "garbage" name as the cultivar name. For example, Tsuga canadensis Golden Duchess ® is the trademarked name for Tsuga canadensis 'MonKinn'. If the trademarked name of Golden Duchess was also the cultivar name, the trademark would be invalid since cultivar names cannot be protected.

Another example is Thuja occidentalis Mr. Bowling Ball ® with the cultivar name of Thuja occidentalis 'Bobazam'. Nobody in their right mind would use the cultivar name of 'Bobazam' in their catalog. However, this particular plant is at the center of some controversy since it was previous sold under the name of Thuja occidentalis 'Linesville' by the Joe Stupka, the man who discovered it. (More on multiple names later).

I suspect the big growers use "garbage" names for

Naming Cultivars cont.

cultivars to also prevent other growers from propagating the plants and selling them under that name. It is, after all, one way to prevent that from happening and provides some limited protection against others propagating and selling the plant. However, anyone can register a name for any cultivar and there are examples of several trademarked names on one cultivar. A "garbage" name does not protect a plant from other propagators, only the name.

There is another protective option growers use that does work for a new plant. It is the patenting of a plant. A plant patent protects the genetic material of a new plant for twenty years. A plant is patented under the cultivar name, and nobody can asexually propagate it without a license from the patent holder. An example would be Tsuga canadensis Golden Duchess® which has the cultivar name of 'MonKinn'. It has the patent number pp# 25,503 for protection against unauthorized asexual propagation twenty years.

A trademark can be renewed every ten years forev-

er, but a plant patent ends after twenty years.

The definitions of variety (var.) and forma (f.) are different from cultivar although they are also written directly after the genus and species of a plant. When they are used, the plant name is not placed inside quotes nor is it capitalized. Let's first take a look at the term: variety.

This term, variety, refers to a group of plants within a species that share one or more characteristics that differ from other members of the species. This difference is usually due to some sort of a habitat difference where the group is located that causes an adaptation and it is passed on to later generations through the sexual production of seeds.

Pinus mugo is a good example of a species with varieties. For example, there is Pinus mugo var. pumilio, the commonly sold dwarf mugo pine. There is also Pinus mugo var. rostrata, which grows more upright and I used it as an understock for grafting.

The variety designation is most commonly used in the conifer world by seed merchants and seedling growers.

So, cultivars result from human intervention, while varieties occur naturally within the plant kingdom. Cultivars are maintained through asexual propagation while varieties can be grown from seeds and are often found in natural groupings.

Forma refers to plants within a species or variety that differ from the typical individuals, usually in a single trait. For example, Picea abies 'Acrocona' is a cultivar name, but the defining characteristic of this cultivar is the production of female cones at the ends of its branches. I understand that this trait occurs in seedlings from 'Acrocona' and it is commonly found in forested regions in Scandinavia. If the garden forms of Picea abies 'Acrocona' came from more than one mother plant or some were grown from seed and entered into cultivation, then the name of 'Acrocona' would be invalid as a cultivar name. It should then be written as Picea abies f. acrocona. Only garden plants that can be traced back to the original selection could be considered as cultivars with that name.



Top: <u>Thuja</u>

<u>occidentalis</u>

'Linesville'

Below: <u>Picea abies</u>

'Acrocona'





Above: Pinus strobus 'Blue Tresses' and Below: Pinus strobus 'Bob's Whiskers' were two of the hundreds of seedlings that were given cultivar names.



Naming Cultivars cont.

I do not believe that the cultivar name 'Pendula' is correct when it is used to label pendulous forms of Picea abies, Pinus strobus, and Picea omorika. I say this because a large percentage of seedlings from plants that were given this name also develop pendulous branches with variable growth habits. They would be more correctly called f. pendula since many of these seedlings were marketed under the

would have been more correct to give those seedlings new cultivar names (many were) or to list them as forma.

Humphrey Welch wrote a book on dwarf conifers that gave us a new term: cultivariant. He coined this word to define a plant that grows differently than the species due to mechanical processes, not genetic.

> example, Picea For

associated cultivar name. It pungens 'Glauca Prostrata' and Picea pungens 'Glauca Procumbens' are produced from side branch grafts of blue selections of Picea pungens. These grafts are plagiotropic and grow laterally, taking many years to develop a leader and growing upright. They are only prostrate due to this characteristic, which is common to the species. Welch proposed a change in the way names were written to designate



Naming Cultivars cont.



cultivariants, but the change has never been adopted. There are a number of cultivariants found in cultivation, mostly firs and spruces. They tend to be prostrate or spreading plants that eventually become arboreal.

Sometimes a cutivar does not grow according to its description in the literature. There are several reasons for this discrepancy. First, the plant may have originated from a witches' broom and the description was based upon the appearance of the broom.

Plant descriptions

should not be written and published until a proper evaluation is made. Such an evaluation should be done over a period of at least ten years and several generations of clones should be part of the evaluation process.

Second, the method of propagation can affect the way a plant grows and even where it can be grown. For example, *Chamaecyparis obtusa* has many dwarf cultivars. If they are propagated by grafting onto Thuja occidentalis, they will be pushed into faster than normal growth rates by oversized root sys-

tems. It can take many years before the plants attain a more normal balance. Also, the species does poorly in clay soils, but grafting it onto Thuja occidentalis allows it to thrive under those conditions.

Picea pungens 'Freida' and Picea pungens 'Waldbrunn' are completely different and lose their garden appeal when they are grafted. However, when cuttings are taken and rooted from these grafted plants, those rooted plants return to their special characteristics. Picea abies 'Pumila Nigra' has the same



Above: Picea

<u>pungens</u> 'Freida'

and Below: <u>Picea</u>

<u>pungens</u>

'Waldbrunn'





Top: <u>Picea omorika</u> f. pendula at Joe Stupka's Below: <u>Pinus</u> <u>strobus</u> f. pendula at Mitsch Nursery

Naming Cultivars cont.

problem and responds in the same manner.

Third, a fastigiate cultivar may not always produce asexually propagated offspring that are like the parent, especially if the cuttings (scions) used in propagation are taken from non-terminal shoots on the tree. Taking cuttings from the wrong areas of a mother plant can negatively affect the plants

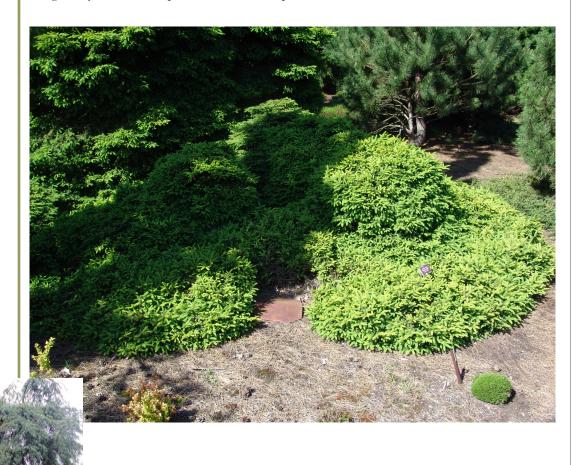
produced.

I am not attempting to turn my readers into taxonomists. I am simply trying to explain how naming works in the plant world, focusing on conifers. Hopefully I did an okay job up to this point. If I did not, maybe this issue's main article will help the reader get to sleep or at least have a nice nap.

The picture below

shows an old Picea abies Pumila Nigra' that was grown from a rooted cutting. If grafted, it would be a large, open tree at this age.

In the next issue of my newsletter, I will go into details about some of my own introductions.



Naming Cultivars cont.



The *Pinus sylvestris* 'Globosa Viridis' (1900) is an old name from the days of Latinizing everything. It means 'Globe Green'. This plant is also found under the name of 'Viridis Compacta' (1923) which means 'Green Compact'. To add to the confusion, some authors contend it is actually *Pinus nigra* not *Pinus sylvestris*. Since 1958 Latin and old Greek names are considered illegitimate.



Two other plants
with old names are:
Above is <u>Pinus</u>
mugo 'Echiniformis'
and Below is Pinus
<u>sylvestris</u> 'Globosa
Nana'



Naming Cultivars cont.



Picea pungens 'R.H. Montgomery' is a compact, conical plant with blue foliage. If I propagate this plant from lateral shoots, I will have the blue foliage but a globose growth habit until a terminal shoot eventually develops. This cultivar name was given at the dedication of the Montgomery Conifer Collection in the New York Botanical Garden @1948. However, it is often written incorrectly without the R.H.





Picea pungens 'Spring Ghost' (syn. 'Bailey's Variegated')

This selection also has a white flush of new growth that gradually turns blue, but there the similarity ends. In the full sun in the Northwest the white growth quickly turns brown as the foliage is badly scorched by the sun. It needs to have its solar exposure limited to mornings only. Its foliage is smaller than that of 'Niemetz' and it is much easier to train into a symmetrically conical tree. If it is not burned by the late spring sun, it can grow up to 9 inches (25 cm) per year.

I believe that Buchholz Nursery in Gaston, Oregon first offered it under this name with an identical tree grown in the Midwest as 'Bailey's Variegated'. Talon would often describe this tree as being more deserving of the name 'Spring Ghost, Summer Toast'.

There was a nice specimen of this cultivar at the former Collectors' Nursery in Washington State. I also saw a very large specimen in the full sun at a nursery in Pennsylvania that showed no signs of any sun scald in mid-summer. The variegation had faded to a washed-out blue foliage color. I believe that hazy skies with warmer nights and higher humidity all contributed to scald resistance.



Picea pungens 'Niemetz'

Niemetz was a nurseryman who was active about 1900. In 1905 he selected a *Picea pungens* that flushed white in the spring, turning blue in the summer. He was in Temesvar, Romania (now Hungary) at the time. According to the literature, he introduced a tree with this description under the name *Picea pungens* 'Flavescens', which has been lost to cultivation. Evidently it isn't lost, it just has a different name. It is amazing to me that this cultivar is so rare after such a long time. Its tendency to develop an asymmetrical outline may be the reason it has remained a rarity for over one hundred years.

It takes a lot of work to grow this selection into a nice, conical tree, making it an expensive tree to purchase at a garden center. Nevertheless, it is well worth the effort since it has outstandingly colored foliage in the spring that continues, to a lesser degree, into the summer. The basic foliage color is light blue. In the spring, however, when the new growth emerges, it is white. It stays white for anywhere from about a week to



several weeks, depending upon the average temperature. It is a real attention-getter in any landscape. Then the white gradually fades to a white frosted blue, eventually becoming completely light blue.

There are several other selections that show considerable similarities to 'Niemetz'. *Picea pungens* 'Bialobok'(syn. *Picea pungens* 'John Paul II'), discovered in Poland in 1939, was introduced in 1992 by the Kornick Arboretum, Poland. *Picea pungens* 'Fruhlingsgold' (syn. 'Domschke') and *Picea pungens* 'Spring Blast' are two others

Picea pungens 'Bialobok' ('John Paul II')

Discovered in Poland in 1939, *Picea pungens* 'Bialobok' was introduced in 1992 by the Kornick Arboretum, Poland. It was renamed *Picea pungens* 'John Paul II' to suit the American market. It grows much like *Picea pungens* 'Niemetz' but under similar growing conditions it flushes its white color about two weeks later than 'Niemetz'.



Picea pungens 'Spring Blast'

I do not see a lot of difference between this selection and "the 'Niemetz' group". It is easier to find one of these for sale than the others and it does appear to be a selection that is similar to 'Jan Byckowski' in that it has similar color and growth habit. It was introduced by Buchholz Nursery, Gaston, Oregon.



Picea pungens 'Domschke'







Picea pungens 'Fruhling's Gold'

I really do not see any difference between Picea pungens 'Fruhling's Gold' and 'Niemetz'. They both exhibit the same foliage flush and growth habit. I have also found the name of Picea pungens 'Domschke' applied to this plant in The Netherlands.

Mesterhazy, in his Encyclopedia of Conifers shows a very old plant in a pinetum that is very dwarf, dense, and globose. I have to wonder if the original 'Domschke' was actually a dwarf selection without a white flush of spring growth.

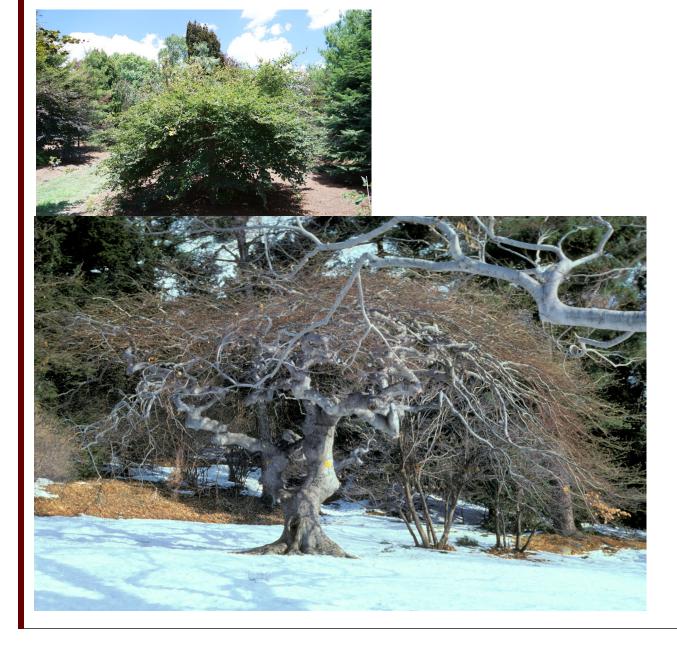
There was a German nurseryman by the name of Ottomar Domschke who is mentioned as the finder of



Tree of the Month: Fagus With Twisted Branches

Fagus sylvatica 'Tortuosa'

Whenever I visit the Arnold Arboretum outside of Boston, I must walk down to the old beech collection and photograph a plant that is so gnarled and twisted that it reminds me of Sleepy Hollow and the night of the headless horseman, *Fagus sylvatica* 'Tortuosa' is a wide-spreading beech with twisted and contorted branches that are quite pendulous at their ends. This cultivar is supposed to come true from seed and has actually formed colonies across parts of Europe. The original selection was made in 1845 in France. Most of the trees in America probably originated from the one pictured below at the Arnold Arboretum. The smaller picture of this cultivar was taken in the Gary Gee Arboretum while the 100 year+ specimen below is at the Arnold Arboretum.



Tree of the Month: Fagus With Twisted Branches

Fagus sylvatica 'Tortuosa Purpurea'

I have not been able to find the origin of this tree but I suspect it is a seedling from a 'Tortuosa' that was pollinated by a purple-leafed beech. It has the same contorted branch structure as 'Tortuosa' but with dark purple leaves that hold their color well into the summer. It is attractive in all four seasons in the garden. This specimen is in Gary Gee's arboretum in Michigan.



Stack 'em Deep & Teach 'em Cheap Excerpt

Section Three: Parents
Chapter Two

Parent Visitations: Keep Them Away from Me

I have never had any fears about opening my classroom to visiting parents. On the contrary, I discovered early on that parents appreciate an open-door policy. Unfortunately, they seldom take advantage of it, probably because most students are embarrassed when their parent attends class with them. Still, it is an excellent opportunity to reach a rapport with parents.

Confrontational meetings are rare when parental contacts are maintained. In addition to my open-door policy, I fostered such connections through weekly emails. Every weekend I would email all my parents a copy of the upcoming week's lessons and assignments. As a result, they never had to ask what work was due. I also sent regular progress reports home to them.

I was one of the first teachers in the Tamaqua School District to computerize my grades. (I used an Apple IIe computer and a dot matrix printer back then.) I loved it, and the students hated it. I could print a detailed progress report every few weeks and send it home for signing. Now, progress reports are commonplace. In the 1970s and '80s, they were not.

Over the years, I dealt with several families who would sue the district at the slightest provocation. I suppose they found it an easy way to supplement their income. Some districts feel it is more cost-effective to settle out of court, even if there is no real case. I never had any problem with these parents or their children when I had them in my class.

I always believed in the value of parent involvement in my educational endeavors. While at Keithley Middle School, I taught two tech science classes as part of my commitment to my Intel Foundation computer lab grant. One of the ways I involved parents was with a science day, on which I arranged to teach my two classes together for an entire morning. We started in the cafeteria with the parents having coffee. Then the class went outside, where the fire department had a boom truck. We did an egg drop experiment and involved the parents in evaluating the results. About 80% of the students had a parent or other relative present. Science Day was very successful, and I was pleased with the turnout since the students in these classes usually performed poorly at school.

Another aspect of the tech science class was a monthly newsletter written by the students. I assigned a general topic, and each student wrote an article for the newsletter. I had three Ukrainian students who could not speak English. A fourth one did, and he would interpret for them and me. They wrote their articles in Russian, and he converted them to English. In subsequent years at Eatonville High School, I did the same for Spanish-speaking students.

I printed copies of the newsletter on a black and white laser printer. One went to each student, the principal, and the other teachers. In addition, I posted a color copy in the classroom.

The newsletter served as a means of integrating science, math, and English. It was also a good way for students to learn about each other. I even allowed students to vary the topics of their articles if something had happened in their lives they needed to share.

Parents were regular visitors to my class at Keithley. Parents visiting classrooms as a part of the educational process was not rare. It was non-existent. Students were not embarrassed because it was a common practice in my classes. Parents remembered and appreciated these opportunities for involvement and made great partners in the educational process.

Stack 'em Deep & Teach 'em Cheap Excerpt cont.

The other teachers had a variety of opinions about my close parental contacts. They ranged from "I don't have the time." to "I don't want parents disrupting my classes."

Many teachers consider parental visitations either with anxiety or extra work. That is unfortunate and discourages parents from being more involved with the school.

Chapter Three

Teamwork: Parents, Do Your Job

The relationships between a teacher and the parents of their students are a "mixed bag." Not all parents respond to the overtures of their child's teachers. Those who don't are the ones who want the teachers to educate their children while they focus on other things in their own lives. They are the parents who respond to low grades and behavior issues with criticism and finger-pointing.

While I was at Eatonville High School, I created a college prep class in earth science. I developed it for the ninth-grade students who used to take biology as Freshmen. There were two sections, and I had high expectations for them. These students had been high achievers in eighth grade. They expected to take college-level and honors-level classes throughout their high school years. Their parents were usually the ones most involved with their children's educational process.

Setting up email groups with the parents for each of my classes, I sent a detailed calendar of the class's activities for the upcoming week every weekend. In addition, I included due dates for assignments and tests.

Almost a third of the parents were clueless about their child's work. They would not read my emails and could not understand the reason for their low grades. Their children did well in middle school, so they left them to their own devices where the high school was concerned. They quickly came to be more involved, and they stopped ignoring my emails.

However, many parents of students in the non-college prep classes tend to be missing in action. They only respond to direct contact and seldom carry through on their promises.

I think these parents' noninvolvement is a matter of fatigue. School becomes almost a nightmare for the parents of a child who dislikes school and refuses to be cooperative in class or do any work. Practically every call from the school is an unfavorable call. The parents become frustrated and at a loss about what to do. By the time their child reaches high school, they have given up and "tuned out" of the educational process.

Some parents have unrealistic expectations for the school system. Sorry to say, I have seen these expectations impact special education teachers and aides at work.

The special education aides in the double portable during the remodel of the high school had a challenging task. Theirs was an area where students who could barely function learned life skills. These women worked with those kids, teaching them how to prepare meals, clean house, sew, and perform other everyday tasks.

I recall one young man, 17 years old, who was 6' tall and weighed about 180 pounds. He was severely mentally challenged and spent most of his day in their care. He needed all kinds of direction and help during the school day. I suppose his parents needed the break, and he was entitled to free education until he turned 21.

I do not know how this came about, but one of the duties of the aides was to bathe him every morning when he came to school. They tried to perform this task but soon had to refuse. It seems that whenever they cleaned him, he would get an erection and start to act up. It caused a bit of a stir among the faculty and support staff. I believe his moth-

Stack 'em Deep & Teach 'em Cheap Excerpt cont.

er had to ensure he was kept clean after that. Sometimes I think the expectations for public schools are somewhat excessive.

Some memorable good times make all the challenges of being an educator worthwhile. For example, students invited me to several graduation parties before I retired from teaching. It is always pleasant to mingle with students' parents, especially when they appreciate your work with their high school graduates. At one party, I talked to a parent of a former student who graduated the previous year. I had her daughter in my CP 9 (freshman) class. She proudly told me how much my class helped her daughter succeed as a college freshman. She remembered much of what we had done with study skills and applied that to her college work, which made transitioning to university coursework easier.

These are the stories I like to hear. Too often, a former student visits and tells me how they wished they had paid more attention in school. Life would have been a lot easier for them.

Chapter Four Students Reflect Their Home Life: The Apple Falls Close to the Tree

The students at Tamaqua High School shared many of the same characteristics as the students at Weatherly. Since they were mostly from rural areas and gang issues were nonexistent, they lived under similar conditions.

During my tenure at Tamaqua, the administration instituted twelve-week minicourses to replace the traditional curriculum with college-style classes. One of the classes I taught was a ninth-grade course labeled Agricultural Ecosystems. I recall having a class discussion about farming methods, and I asked the class to tell me what a farmer put on a field to help the crops grow. One of the girls, "Mary," raised her hand, and when I called on her, she said, "Shit." Then she gave me a wide grin and rose straighter in her seat. She was a girl who sat very quietly during class and seldom volunteered anything. Now she had finally answered a question and appeared immensely proud of herself. I had to be careful how I corrected her language, so I told her that she gave a good answer but should refer to it as manure in mixed company.

I taught two brothers at Eatonville High who worked at their grandfather's hay company. They both exhibited only a passing interest in school. However, academics were not a priority since they planned on taking over the business. Today they are successfully running it.

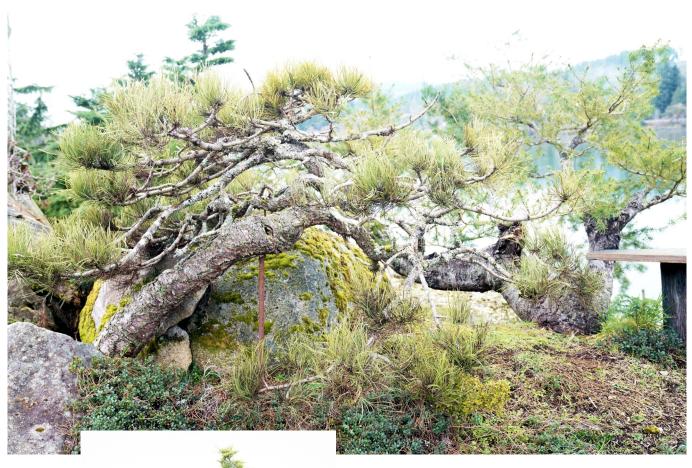
We say that the apple does not fall far from the tree whenever a student's behavior mimics that of a family member. This behavior is not always a bad thing.



Blast From the Past: Marvin Snyder and his *Picea omorika* f. pendula



Elandan Gardens





Coenosium Rock Garden



——Organization

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ENGLISH IS HARD

- 1. The bandage was wound around the wound.
- 2. The farm was used to produce produce.
- 3. The dump was so full it had to refuse refuse.
- 4. We polish Polish furniture.
- 5. He could lead if he would get the lead out.
- The man decided to desert his dessert in the desert.
- 7. Since there is no time like the present, he thought it was time to present the present.
- 8. A bass was painted on the bass drum.
- 9. When shot at, the dove dove into the bushes.
- 10. I did not object to the object.
- 11. The insurance for the invalid was invalid.
- 12. There was a row among the oarsmen about how to row.
- 13. They were too close to the door to close it.

More English???



