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Bob's News & Musings

What's In A Name?

We use a name as a form of identification. For example, my name, Robert Lewis Fincham, identifies me, and when you read that name here, you associate it with me. It has three parts, but it does not solely belong to me.

When I was growing up in eastern Pennsylvania, I thought that Fincham was a rare name and that most of them lived around Culpeper, Virginia. As I got older, traveled the country, and explored the World Wide Web, I discovered other concentrations of Finchams around the country. One related branch has changed the spelling to Finchum, but they are still part fo the Fincham Clan. I also discovered several other Robert Lewis Finchams existed as well.

In other words, a three-part name is seldom, if ever, the sole property of one individual. Even Fincham, nowhere nearly as common as Jones or Smith, fits this statement. An extension is added to every name to identify a unique individual. That attachment is in the form of a number. In the United States, that number is a social security number.

In the conifer world, something similar exists in a taxonomic structure where living things are placed into groups with the final step being the individual, who is given a two-part name: a scientific name. Horticulturally, we take it a step further and sometimes add a third part to the name: the cultivar designation.

Carl Linnaeus first proposed a process to organize plants and animals by physical features. His new way of classifying living organisms grouped all species into higher categories, known as taxa, and the science was named taxonomy.

The largest grouping was the Kingdom. One such Kingdom is the Plant Kingdom. The members of this Kingdom do not move under their own power, make their own food, are multicellular, possess chlorophyll, reproduce asexually or sexually, and have different structures that perform different functions: anchorage, reproduction, support, and photosynthesis.

According to these rules, fungi are not part of the Plant Kingdom. They are part of another kingdom. Bacteria have two kingdoms, and the animals have one of their own, as do the Protista. There are altogether six kingdoms.

A Kingdom is a classification with a vast number of different kinds of individuals. For example, sticking with the Plant Kingdom, a tree and a flowering bush are described in the same way at the Kingdom level. That is not very helpful, but at least we know they are both plants. For more clarification, we need to set up some smaller groups by adding more specific characteristics to create clusters

Special points of interest:

- **I am not alone in the world of Fincham.**
- **What plant is not in the Plant Kingdom?**
- **A way to stop kids in school from watching the clock.**
- **What does cursive have to do with English?**
- **Mothers are very logical.**

Inside this issue:

These Abies procera cones are very impressive.

What's In A Name? cont.

of similar plants within the Plant Kingdom according to some criteria.

There are two smaller groups just below the Kingdom level: plants with a vascular system and plants without a vascular system. The vascular system connects the plant's roots with the plant's food-producing parts (xylem and phloem).

I focus on two of the vascular plant groups in my newsletters. They are the ones that flower and produce seeds (Angiosperms and gymnosperms). Club mosses, horsetails, and ferns are vascular plants but are not part of my focus.

The Angiosperms have two major divisions, monocots, and dicots, and produce their seeds inside a fruit. My tree of the month is a dicot, but I won't go into the group's characteristics.

Gymnosperms have some distinguishing characteristics from Angiosperms. Their flowers are not actual flowers. They are more correctly called strobili due to their radically different and more ancient structure. There were no insects when the gymnosperms evolved, so their reproductive structures did not have to attract insects for pollination. They depended upon the wind.

Likewise, they did not depend upon animals to help spread their seeds. They depended upon the wind for that as well. So, instead of fruit, they produced their seeds in cones. This group was named Gymnosperm for that reason. A gym in ancient Greece was a place where people exercised in birthday suits. And since sperma relates to seed in botany, this plant group was named for its naked seeds. When a mature cone dries or is exposed to heat, the scales open and the seeds fall out, to be spread by the wind.

This grouping process continues as the group sizes become smaller at each level since the characteristics become more specific. It was once a simple classification system, as shown here:

Kingdom
Phylum
Class
Order
Family
Genus
Species

The passage of time and the development of additional criteria made this system much more complex and way beyond the focus of this short article. There are things like Subfamily, Subclass, Subfamily, etc., all to reduce the numbers of individuals within specific groups by creating additional subgroups.

Then, as taxonomists learned about specific plants, new groupings or certain plant classifications were changed. Taxonomists often don't agree, and the whole thing becomes confusing for the layman, especially since this process is ongoing.

Now that you have learned your taxonomy for today, I come to the main point of this article: naming conifers.

Conifers are the most numerous members of the gymnosperms. They dominate the boreal forests of the northern hemisphere, and many adapted to colder climates with downward-facing branches and biochemical properties that resist freezing. The cycads and ginkgos are also gymnosperms but not the focus of this article. All living conifers, such as Araucaria, cedar, celery-pine, cypress, fir, juniper, kauri, larch, pine, redwood, spruce, and yew, are considered here. They are the largest and most economically important group of the gymnosperms.

As of 2016, most taxonomists agreed that the living conifers comprised 65–70 genera and 600–630 species. The genus and species classifications combine to assign a name to a specific group

What's In A Name? cont.

of plants that are identical in certain prime characteristics, the most important being the ability to reproduce offspring through sexual reproduction.

That name is a conifer's scientific name, and it is the same all over the world and is always written in the original language, usually derived from Latin or old Greek.

Common names are variable and useless outside the geographic region where they are used. The best example is the ad nauseam use of cedar in common names.

These are all false cedars. They can be easily differentiated by their foliage, which is soft, scaly, and feather-like.

Northern White Cedar (*Thuja occidentalis*)

Eastern White Cedar (*Juniperus virginiana*)

Atlantic white cedar, Atlantic white cypress, southern white cedar (*Chamaecyparis thyoides*)

Western Red Cedar (*Thuja plicata*)

Alaska Cedar (*Cupressus nootkatensis*)

Incense Cedar (*Libocedrus decurrens*)

Port Orford Cedar (*Chamaecyparis lawsoniana*)

The true cedars in the *Cedrus* genus have needle clusters on woody pegs.

Atlas Cedar (*Cedrus atlantica*)

Cyprian Cedar (*Cedrus brevifolia*)

Himalayan Cedar (*Cedrus deodara*)

Cedar of Lebanon (*Cedrus libani*)

Common names lead to confusion and tend to be more geographic. For example, here are some common names for a tree native to the northern United States and Canada: Canadian spruce, skunk spruce, cat spruce, Black Hills spruce, western white spruce, Alberta white spruce, and Porsild spruce.

When working with conifers, one should always use the scientific name. Imagine calling *Picea glauca* 'Little Globe' the Little Globe Skunk Spruce (pic).

Even scientific names get changed by the taxonomists. For example, they changed *Abies excelsa* to *Picea excelsa*, which they later changed to *Picea abies*, the present scientific name for the common Norway spruce. The scientific name was changed when the plant was placed in a different genus (*Abies* to *Picea*) and then changed again when taxonomists gave it a new species name (*excelsa* to *abies*). They did it over long periods, so only people reading old literature might be confused.

More recently, the name *Thuja orientalis* was changed to *Platycladus orientalis*. Interestingly, its old genus *Platycladus* before it was changed to *Thuja*. So it has gone in a circle, and the old nurserymen who kept the original name from the 1930s were correct.

There is a horticultural aspect to all of this taxonomy. Garden selections of conifers used today vary from the general species populations. For example, millions or perhaps even billions of individual *Picea abies* plants are growing worldwide. When one is selected as a garden plant, it needs a name. That name will be attached to every plant reproduced asexually from the original. It needs this name to define it. Taxonomists use them as footnotes, loggers want nothing to do with them, horticulturalists want them, and nurserymen need them to make a living. It is called a cultivar.

A scientific name is written in italics or underlined, with the first word always capitalized and the second in lowercase. A cultivar name is capitalized and enclosed in single quotes.

Since I have a lot to say about cultivars, I will do that in my April newsletter.

If you could read through this whole article, Good on ya.

"To catch the reader's attention, place an interesting sentence or quote from the story here."

Cedrus atlantica 'Glauca'

The male and female structures (strobili/cones) are abundant on this tree in the Cambridge Botanic Garden located in Cambridge, England. It is a true cedar with clusters of needles on short stalks. This species "flowers" in the fall instead of the spring like other conifers.

Picea abies '????'

Picea abies is an impressive species with considerable variation within the species. The tree shown here at the Pruhonice Botanic Garden near Prague shows an old tree with a pendulous growth habit. It was given a cultivar name due to its landscape value. I'll mention it in the April newsletter. If you are very curious, drop me an email for the name.

Platycladus orientalis 'Elegantissima'

Platycladus* or *Thuja* or *Platycladus

This genus has bounced around a bit. The old literature like the first name, *Platycladus,* but it was changed sometime in the mid-century to *Thuja*. Recently, it came back to *Platycladus*. This switcheroo makes sense to the taxonomists, but does confuse nurserymen who try to keep names straight.

Even more recently, Cupressus nootkatensis has its name bouncing around between *Xanthocarpa*, *Chamaecyparis*, and *Cupressus*. It is sort of a—use the name championed by the taxonomist you like the most. At least they are not playing with the species name.

Juniperus virginiana

Commonly called the Eastern white cedar, its scientific name is very different from that designation. I suppose the common name has something to do with the smell of the wood.

Conifer of the Month: *Pinus strobus* 'Stowe Pillar'

In the 1980's Greg Williams, who lives in Vermont, discovered a fastigiate form of Pinus strobus near Stowe, Vermont (left). As is typical of Williams, he sent scions to several individuals. Its superior attributes resulted in the introduction of *Pinus strobus* 'Stowe Pillar'. I was one of the early recipients of scion wood from Williams and I have been growing plants since 1990. They are planted in a row at Coenosium Gardens and have weathered several severe snow and ice storms that caused extensive tree damage throughout the region. The worst damage I have observed was the splaying or outward spreading of a few main branches that were not recoverable. Most of the branches that were spread apart recovered the following spring as the new growth appeared to pull them upward.

Growing about 1 foot (30 cm) per year, *Pinus strobus* 'Stowe Pillar' is superior to 'Fastigiata' in every way. It has a more moderate growth rate while maintaining a very tight branch structure as it ages.

Below left is a *Pinus strobus* 'Fastigiata' while a 'Stowe Pillar' is to its right. Both are nice at this age, but the 'Stowe Pillar' is considerably narrower even though several years older.

Pinus strobus 'Stowe Pillar' cont.

The older *Pinus strobus* 'Fastigiata' plants ahown above, are old, and the branches are splaying outward. It will become more pronounced as they continue to age. The central picture shows Greg Williams taking scion wood from the original plant, which is apparently quite old and still narrow in spite of Vermont winter snow and ice.

Tree of the Month: *Quercus robur* 'Facrist'

An English oak was discovered growing in Wiltshire, England about 1917. It had small, clustered, and twisted leaves. Each leaf was also divided into unequal parts by its midvein.

Acorns grown from this tree produced seedlings true to the parent tree and are found in cultivation under the name of *Quercus robur* 'Cristata'.

Dick van Hoey Smith was an expert on beech and oak species and grew many in his Arboretum Trompenberg in Rotterdam, Holland. *Quercus robur* 'Facrist' was found as a spontaneous seedling in 1982 growing in his arboretum. Its fastigiate growth habit and 'Cristata' foliage showed it to be a hybrid between these two cultivars, thus he named it 'Facrist' and introduced it in 1990.

The pictures below show the foliage of ;Cristata' and an old specimen of 'Fastigiata' at the Hillier Pinetum in England.

The picture on page 11 shows a mature tree at my former Eatonville property.

Tree of the Month: *Quercus robur* 'Facrist' cont.

Stack 'em Deep & Teach 'em Cheap: an excerpt

Section One: Students
Unit Three: Curriculum
Chapter Seven: Forgotten Skills: Who Needs Them Anyway

Part One. Printed Letters: Cursive Writing is Not Writing with Bad Language

I can't even count how many times my students complained about my handwriting. I use block letters on a blackboard (or whiteboard for non-chalk writers) and cursive writing for comments on graded papers. No matter how carefully I wrote my suggestions, I always heard complaints. I used to figure that the kids were screwing with me.

Then I discovered that cursive handwriting had disappeared from the curriculum in the elementary grades at Eatonville. No wonder the little urchins could not read my script. Students did their writing by printing block letters. I suppose this brilliant idea appeared because of a proliferation of notebook computers and a resulting lack of pens and pencils. I wonder if using block letters means the kids have a font choice.

I suspect the elementary teachers went along with this practice to have more time to teach to the high-stakes testing forced upon their students. Teachers give up a lot of things for their profession. Now elementary teachers have to sacrifice one of the three R's to bolster the others. That way, the kids might be successful on the high-stakes tests, even if they cannot sign their names.

We will not be able to return to the practice of signing documents with an "X" since any witnesses would have the same signing issues.

Part Two. Clocks: It's Hard to Tell Time by Mickey's Hands

In the elementary curriculum, there was one departure from the old days that I could use to my advantage. Students came into the high school unable to tell time via an analog clock.

After the remodel of Eatonville High School, every classroom had a digital clock over the entrance door. Students were always turning around and looking at it, counting the minutes until class ended. I bought a large, round analog clock and hung it on the wall behind the students. Then I covered the digital clock. I no longer had any problems with students trying to "pack up" five minutes before the end of class. They could not tell the time of day by using the minute and hour hands of the clock. They would turn around to look at the clock and then face front again with puzzled expressions on their little faces.

Welcome to the digital age.

Part Three. Practical Math: What's So Practical About It

I watched my science students at Eatonville High with a bit of despair in my heart. Where were our future carpenters and general contractors? In my CP Science, Nine classes were the only students who could read and effectively use a ruler. However, some of them still found it a difficult skill to master. The tenth-grade students in Life Science had the same issues, while the Biology students could handle the larger divisions on the ruler scale.

Being a science teacher, I taught students how to work within the Metric System. Everything is based upon powers of ten, making it a simple system. All calculations within the metric system can be made without any heartburn. Even so, students had trouble with it. When I taught students how to convert measurements between the Metric and English Systems, I might have been speaking Klingon. It was almost hopeless.

The English System is an absolute mess; its units are arbitrarily derived and divided into smaller parts by fractions. A ruler with its ½, ¼, 1/8, 1/16, and 1/32 is confusing to today's students. Most were utterly lost when asked to do precise measurements with such rulers. As for doing calculations with the fractions, I might as well have been using Chinese characters.

Somewhere along the line, most of my ninth graders lost their understanding of fractions. Unfortunately, they also entered high school with little knowledge of decimals, as evidenced by their difficulty understanding the metric system.

One of the reasons for this stumbling block is the compartmentalization of education. Students work with math in the math class. Then they shove that material into empty rooms in their brains and lock the doors when they go to another subject. They only open those doors in math class. As a result, they miss the application of the math they are learning and do not fully grasp how valuable that subject may be in their future.

Practical math was a class that tried to keep that door open. Too bad it is gone from the typical math program in favor of National Standards and high-stakes testing.

Stack 'em Deep & Teach 'em Cheap: an excerpt part 2

Section Two: Administration

Unit One: District Concerns

Chapter Seven: Administrative Politics: A Good Appearance is More Important Than Student Learning

As I mentioned earlier in Chapter Four of Unit Three (Curriculum), after my two years of teaching Tech Math/Science at Eatonville High School, the administration told me they had to drop it from the curriculum. The only reason ever given was that I was not an "exceptional teacher" since I did not have a math endorsement on my teaching certificate. The Washington State Department of Education said I could teach the class since the math was only a single period each day. Still, the curriculum director decided she did not want that to happen. Of the fifty students who previously went through my class (most of whom had failed three years of general math in middle school), most succeeded in algebra. All, but for a few, successfully graduated from high school.

As the state kept tinkering with standards and testing, we had to keep revising the curriculum at Eatonville High School. Previously ninth-graders could take biology if their middle school grades indicated they should be successful. The other students took a physical science class called Science 9. This practice meant a cadre of high-achieving students skipped ninth-grade science. Usually, they did well in biology since they competed against tenth-grade students who were considered average. The higher achieving tenth graders were in chemistry.

The advent of the Washington Assessment of Student Learning (WASL) with a strong focus on earth science changed the ninth-grade curriculum. It meant taking the biology option away from ninth-grade students. I always felt an earth science course was more valuable to those students. It instilled a high level of preparation for the other science classes they would take at the high school level. We did offer an advanced placement elective in earth science for the students who would have taken biology as ninth-graders.

One year, near the end of the first semester, I had one of my ninth-grade slackers come to me during class (not on his own time) to tell me that I had to give him the twenty assignments he had not done so he could make them up. His father had visited the office about his grades, and they told him that his "little boy" could make up all missing assignments. So, I took two minutes to show him what he missed on his grade printout. Unsurprisingly, he never turned the work in for a grade.

One of the goals I always strove for was to hold students accountable for deadlines. That disappeared near the end of my career. It became school policy to accept late work as far back as 18 weeks, even if the student wasted class time and screwed around instead of completing it. We could only give half credit, but students could copy other students' returned work and turn it in without getting caught. That did away with another life skill I tried to teach. However, it made for happier parents and fewer complaints to administrators and school board members.

Superintendents and principals are very aware of their relationship with the public. After all, they are ultimately responsible for everything within the school district. Yet, the teachers get blamed for underperforming students and the failure of a school.

There is an old saying that s**t rolls downhill when referring to a chain of command. The Superintendent is the highest link in the chain, and the principals answer to them. Shifting any perceived blame down the chain is unfortunate and deception for various reasons.

Administrators do not have the same protections as teachers and are sometimes more concerned about renewing their contracts than solving problems. Public perception often matters more than program success. For example, as described above, I lost a successful math program so that the district administrators could say they had a 100% correlation with the "exceptional teacher" definition. They complied with strict criteria published by the Washington State Department of Education to achieve a public perception of excellence.

Elandan Gardens, Bremerton Washington

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Coenosium Rock Garden at South Seattle College Washington

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Organization

COENOSIUM PUBLISHING

Robert Fincham
12609 118th Street Ct. E.
Puyallup WA 98374

Phone: 253-208-0233
Email: bobfincham@mashell.com

I am on the web.

www.robertfincham.com

Hilarious Things My Mother Taught Me...

1. My mother taught me TO APPRECIATE A JOB WELL DONE . "If you're going to kill each other, do it outside. I just finished cleaning."
2. My mother taught me RELIGION. "You better pray that will come out of the carpet."
3. My mother taught me about TIME TRAVEL . "If you don't straighten up, I'm going to knock you into the middle of next week!"
4. My mother taught me LOGIC. " Because I said so, that's why."
5. My mother taught me MORE LOGIC. "If you fall out of that swing and break your neck, you're not going to the store with me."
6. My mother taught me FORESIGHT. "Make sure you wear clean underwear, in case you're in an accident."
7. My mother taught me IRONY "Keep crying, and I'll give you something to cry about."
8. My mother taught me about the science of OSMOSIS. "Shut your mouth and eat your supper."
9. My mother taught me about CONTORTIONISM. "Will you look at that dirt on the back of your neck!"
10. My mother taught me about STAMINA. "You'll sit there until all that spinach is gone."

In Future Issues

The April issue will have its main article focused upon conifer cultivars. Here is a **partial** listing of the material I will be writing about (not in any special order):

Cultivariant
Definition
Forma and variety and cultivar
The 'Pendula' conumbdrum
Fancy names
Sports and reversions
Sources
Cultivar hybridization
Misnaming
Silly names
Garden labeling
Propagation effects
Grafting vs rooting

If you would like me to include anything else about cultivars, feel free to email me with your suggestion/request.

You may have noticed the two pictures from Elandan Gardens and the Coenosium Rock Garden without any text.

I will be sharing a couple pictures each issue through July for a simple reason: I will be organizing a Saturday tour of these two places in early August. It will be as an American Conifer Society Rendevous. As time passes, I will be sharing the specifics with my readers.

Until then, maybe I can generate a little interest.

If you have my Artsy/Fartsy book, you are probably familiar with Elandan.