Garden Club of Mount Prospect Horticulture Presentation

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By Tom Warnke

Good morning, everyone. Today, I’d like to talk about conifers. Fifteen minutes isn’t very long to cover the immense amount of information that I could share, but I’ll try to cover the main points. And to be sure, I’m no expert. I’ve just learned more and more about them with research and time. I’m also going to concentrate on native, familiar conifers and the most popular non-native species. I hope you’ll pardon me if I repeat a lot of information that you already know, but hopefully, you’ll say to yourselves afterward, “I didn’t know that!” And, before I start, all but two of the photos that I’ll be showing are of conifers that Tom and I have planted on our property.

Conifers are mostly evergreen trees and shrubs. They usually have needle-shaped or scalelike leaves and include forms, such as pines, with true cones that bear seeds and others, such as yews, with a flesh-covered fruit.

While conifers are extremely diverse, for my purpose today I’m going to mention the three most common categories. The Latin classifications are very specific but also confusing. It’s easiest to mention three simple groups: pines, cypresses and yews. There are hundreds of species within the pine and cypress categories, and fewer within the yews.

One reason I wanted to talk about conifers is that I was confused for years about the differences between pines, firs and spruces. Going to buy a Christmas year after year was an eye and wallet-opening experience. What’s the difference between a Fraser fir, a balsam fir and a Douglas fir? And what about the spruces? It seemed to me that the biggest difference was how easily the needles punctured my skin. There are also confusing common names that, as it turns out, are often wrong when it comes to their true classification.

Does anyone know the rule of thumb, not always accurate but good enough for most people, used to tell the difference between firs, spruces and pines, which by the way, are all in the pine family? PAUSE

It’s not difficult. For firs, if you look closely at their needles, think of the letter F for FLAT. 1 PHOTO OF DOUGLAS FIR NEEDLES. For spruces, think of the letter S for SQUARE. If you cut through a spruce needle, a cross section would look roughly four-sided. 2 PHOTO OF SPRUCE NEEDLES. For pines, the P means nothing, but their needles are generally longer and in groups of 2, 3 or 5. 3 PHOTO OF EASTERN WHITE PINE NEEDLES. Also within the pine family are hemlocks with fir-like needles but even flatter 4 PHOTO OF NORTHERN JAPANESE HEMLOCK NEEDLES AND CONES.

Larches and Cedars are also part of the pine family.

The cypress family is composed of mostly evergreen coniferous trees with small rounded woody cones and flattened shoots bearing small scale-like leaves. Most cypress trees live in warmer climates than our own, but the best-known groups for us are junipers and redwoods, also called sequoia, and the bald cypress.

Yews are a much smaller family of trees and the most shade tolerant of conifers. They also produce a red berry that holds their seed rather than a cone.

Now, for some more specifics about the groups of conifers. All conifers lose some needles every year but some lose all their needles. How many know which trees are deciduous conifers? PAUSE

The American Larch, or Tamarack, Dawn Redwood and Bald Cypress fill that slot. 5 PHOTO OF AMERICAN LARCH OR TAMARACK, 6 PHOTO OF DAWN REDWOOD, 7 PHOTO OF BALD CYPRESS AS BONSAI. All three of these trees can be grown in our region. There are Dawn Redwoods planted along Northwest Highway. An interesting fact about Dawn Redwoods is that they were thought to be extinct until a forester in China discovered a grove of them in 1944. Seeds were collected and distributed for propagation in 1948 and it is now a very popular landscape tree. This is truly a good news comeback for a beautiful tree!

As you may know, the pine family is almost exclusively the preferred wood for construction. It’s likely that most every structural wood portion of your home is one of three species: Southern yellow pine, Hem-Fir and Douglas-fir. They are all softwoods as opposed to hardwoods like oak and maple.

There are many kinds of pines in our area. You will see Eastern white pine with long soft needles. 8 PHOTO OF WHITE PINE. Red pines have pairs of needles, as do Scot’s pines, the latter’s needles being somewhat twisted. 9 PHOTO OF SCOTS PINE NEEDLES. Austrian pines have pairs of long sharp needles. Due to a fungal blight, Austrian pines are not recommended as landscape trees.

Spruces are within the pine family and can be most easily differentiated from what we call pines by their needles. Spruce needles are generally short and always borne singly along the branches of the tree. Spruces will drop their cones intact whereas pine cones will open to disperse the seeds.

In our area, the most common spruces are the Colorado Blue spruce and Norway spruce. 10 PHOTO OF BLUE SPRUCE. 11 PHOTO OF NORWAY SPRUCE. There are also Red, White and Black spruces. Red spruce is used as a timber source. The wood of the white spruce is used for pulp, paddles, oars, piano sounding boards and dimension lumber, while its cones are used to make decorative wreaths. Black spruce was used for beer. Norway spruces are used mostly for landscaping with their beautiful slightly drooping branches.

The most common North American cedars are the Northern White cedar, commonly known as Arbor Vitae, Alaskan Cedar, Red Cedar and Incense Cedar. The Northern White cedar was the first North American tree transplanted to Europe. Western Red cedar wood is used for decking and other exterior construction, while incense cedar is used for pencils and venetian blinds. The Weeping Alaskan cedar is becoming a very popular landscape tree and for good reason. It’s dramatic growth habit truly differentiates it from other evergreen trees. 12 PHOTO OF WEEPING ALASKAN CEDAR.

Among fragrant conifers are the junipers. Everyone probably knows that most gin gets its fragrance and flavor from juniper berries. Eastern Red Cedar, used in closets and cedar chests, is actually a juniper. Spanish juniper, also called Palo Santo, is burned as incense to clear negative energy from your home. I’m not sure how effective it is with relatives.

Common firs are divided into two groups. White, Noble and Fraser are mostly in the West while Balsam, and Douglas are in the East. 13 PHOTO OF WHITE FIR. Balsam fir was the standard for Christmas trees for decades.

A true fir will bear its cones in an upright position, meaning it grows up from the branch rather than hanging down. 14 PHOTO OF WHITE FIR CONE. By the way, most conifers produce cones in two-year cycles, the buds being produced in the first year which mature in the second year.

Yews are the smallest family of conifers with roughly 8 major genera but dozens of varieties. For us, the most notable are English and Japanese yew, Japanese being hardier than English. 15 PHOTO OF JAPANESE YEW. Yews are the most forgiving of conifers if you want to prune them. They are also toxic to humans and animals except for deer, which is unfortunate if you want to use them for landscaping in deer country.

English Yews were considered the Tree of Death because of their toxicity and were usually planted in churchyards to keep them isolated from the public and animals. Yews can live well over 1,000 years and given that time, can reach heights of 100 feet.

For age and size, the conifers are clear winners. The largest living thing on earth in terms of mass are the Giant Sequoias, a cypress tree. The largest is the General Sherman Sequoia at 52,000 cubic feet. That volume would fill your standard quarter acre lot to a depth of 5 feet. The tallest are the Coastal Redwoods of California. A tree called Hyperion is 380 feet tall, nearly the height of a 40 story building. The oldest are the Bristlecone pines, one of which is 4,853 years old. And finally, one type of juniper grows at the highest altitude of any plant on the planet. It is found in Tibet at nearly 17,000 feet above sea level.

We all know that being evergreen, other than larches and sequoias, conifers offer year-round landscaping interest. Especially for small yards, dwarf conifers and ground-hugging junipers can evoke a large landscape within a small space. I particularly like the simple and tranquil effect of evergreens when grouped in a Japanese style garden, around a pond or as a specimen tree. Here are a few photos of how I’ve used them. 16 PHOTO OF CARPET JUNIPER. 17 PHOTO OF JAPANESE NORTHERN HEMLOCK AND KOREAN ARBOR VITAE. 18 PHOTO OF WEEPING LARCH.

Dwarf trees come most often come from genetic mutations that can occur on any tree. One mutation is called Witches Broom. Witches Broom and other mutations cause a proliferation of growth within a small area. Horticulturists will take this portion of the tree and propagate it. Thankfully, it produces some beautiful trees for small spaces. 19 PHOTO OF DWARF EASTERN WHITE PINE DIGGY. Another condition that often results in small conifers is ‘pendula’ or weeping. 20 PHOTO OF WEEPING BLUE SPRUCE, 21 PHOTO OF WEEPING NORWAY SPRUCE.

Many of the trees we’ve planted were grown by a process called air layering. Air layering involves stripping the bark of a branch on a mature tree, wrapping and keeping moist that part of the branch, and waiting for the portion beyond the cut to develop roots of its own. This can be done with almost any tree or shrub. If it succeeds, it produces a mature-looking tree in a small form. 22 PHOTO OF ABBY’S GOLD BLUE SPRUCE. 23 PHOTO OF COLORADO BLUE SPRUCE, UNKNOWN VARIETY. 24 PHOTO OF ENGELMANN SPRUCE. 25 PHOTO OF VARIEGATED JAPANESE WHITE PINE.

Lastly, conifers are very popular as bonsai subjects. It’s easy to purchase a small juniper at Home Depot and within a few years, create the effect of a mature tree. 26 PHOTO OF HINOKI CYPRESS AS BONSAI. 27 PHOTO OF JUNIPER WITH WHITE PINE SEEDLING AS BONSAI.

In conclusion, I hope I have been able to give you some facts about conifers that will spur your interest in these trees that provide year-round beauty and interest.

I have left a copy on each table of a guide to conifers that may help you in identifying one conifer from another. Thanks, and enjoy the rest of the meeting.

LIST OF PHOTOS

1. Douglas Fir needles
2. Sprue needles
3. Eastern White Pine needles
4. Hemlock needles and cones
5. Tamarack
6. Dawn Redwood
7. Bald Cypress as bonsai
8. White Pine
9. Scots Pine needles
10. Blue Spruce
11. Norway Spruce
12. Weeping Alaskan Cedar
13. White Fir
14. White Fir cone
15. Yew
16. Carpet Juniper
17. Pond with Northern Japanese Hemlock and Korean Arbor Vitae
18. Weeping Larch
19. Dwarf Eastern White Pine
20. Weeping Blue Spruce
21. Weeping Norway Spruce
22. Abby’s Gold Blue Spruce
23. Colorado Spruce, unknown variety
24. Engelmann Spruce
25. Variegated Japanese White Pine
26. Hinoki Cypress as bonsai
27. Juniper with White Pine seedling as bonsai