

Junipers: Part One

By Randy Brooks, August 2006.

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What's in a name?

Identity; for one thing. Your friends know you by your name, and certainly a stranger would have no other way of knowing who you are – not being familiar with you by appearance. And while you may be able to deduce cultural, racial, and ancestral characteristics of a person from their name, the names we choose for ourselves and our offspring are more art than science and probably convey more about the personality of one's parents than anything substantial about us as a life form. About the only thing you can normally deduce about a person from their name is their sex, although some – like Randy – can be ambiguous.

Scientists, being the retentive sort they are can't rely on art. They need something a bit more defining. Telling us your pet's name is Spot doesn't really tell us whether your pet is a dog, cat, llama, or frog. If I were to speak to you on the phone, and you told me your name was John, it would be presumptuous of me to make any assumptions about you other than you were probably male, and if your name were Jean all bets would be off.

Taxonomy, the science that involves the classification of life forms, seeks to alleviate any such ambiguities. Through very specific categorization and naming conventions, taxonomists try to make sense of Mankind and the various life forms around us, and to help explain our relationship to each other. Knowing where we come from, as well as other life forms, helps us to better understand who and what we are.

"Hi," the voice on the phone says, "My name is Eukarya Plantae Pinophyta Pinopsida Pinales Cupressaceae Juniperus sargentii var 'Shimpaku'."

My first thought is, "Man, I'd hate to sign your checks," with the second being, "Yeah, I'd hate my parents, too."

"I'm applying for the position advertised," the voice continues, "and I'd like to tell you a little about myself..."

"No, wait," I say, "let me test my powers of deduction, and you can fill in the blanks. From your first name I would gather that there's a pretty good chance that you are either a plant or an animal, and your second name tells me that, indeed, you are from the kingdom of plants."

"Sure," the voice coming across the line says, "but why should that be important for this position?"

"Well, knowing that you're a plant means you're going to require some care. A goat or an elephant might go out and find water and food for themselves, but I haven't seen many of your type down at the watering hole lately. You're not a very self sufficient group are you?"

"Quite the contrary. We manufacture our own food. That's one of the things that separate us from animals, and I can seek out my own water unless this is a containerized position. But, I think you'd need a little help, too, if you were locked up in a room."

“Okay, okay, you don’t have to get huffy,” I say. “Now from your third name, I gather you belong to a group of plants that we used to refer to as gymnosperms, no?”

“Very good,” it says, “Yes, Pinophyta do belong to that group that has been broken up in recent years. We represent the segment that you probably refer to as conifers.”

“Hey! You said it not me. You won’t hear any derisive slurs around here if you come on board.”

“Actually,” the voice replies, “we’re rather proud of our heritage. Pinophyta have been around longer than most other plants. The largest living things on earth are Pinophyta, as are the tallest, and the oldest. Some of our elders out west have been around thousands of years.”

“Condo living, keeps ’em around forever.”

“No, it’s more like the clean mountain air, fresh clear water, and remoteness from Man that they attribute to their longevity.”

“Ouch,” I mumble.
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Collected north of Austin, Texas in 1995. It is estimated to be 50 years old. It had a lot of natural jins and sharis and was cut down from 6 feet to 3 feet after it was collected. It was allowed to grow for 3 years before styling. It grows well in South Florida and has few pests. The coarse needles are very similar to California Junipers.

“Yes, I hope those will be some of the benefits of this position. I certainly can’t see my self joining up with a collection that doesn’t provide its members with proper benefits. I have a list of the things I will require here. Clean water, a proper fitting pot, regularly scheduled soil changes, proper regular watering, plenty of food agreeable to my palate, certainly clean living conditions, I just can’t stand bugs...”

“Yeah, yeah, we run a nice place here,” I assert, “now where were we? Oh, yeah, we were talking about your division Pinophyta.”

“Yes it is composed of just one class, Pinopsida, and one order, Pinales,” it says.

“The order of Pinales, impressive! You’re a close knit group aren’t you?”

“Yes, we’re completely monophyletic.”

“Hey, you don’t have to use them two-bit words with me. We talk like normal folk around here.”

“It only means that we have common origins and thus share many traits,” the voice explains.

“Oh, monophyletic, eh? Like me and Robert Redford?” I ask.

“Hardly.”

“Yeah, well you may have common origins, but that order of yours is a pretty diverse group. Cedars, pines, spruce, firs, redwoods, larch, cypress, junipers, yews, podocarpus. Looks to me like you’ll let pretty much anyone in.”

“Oh, but we all have a commonality.”

“What, like the Borg?”

It ignores my attempt at humor, “We all bear cones.”

“Really. I thought junipers had berries, not cones,” I’ve got her, I’m sure.

“Juniper berries are just fleshy cones.”

“Then why do they call them berries?!” It is really starting to tick me off.

“Listen, about the position, maybe I should seek employment elsewhere.”

“Hold on, hold on! I didn’t mean to get you riled up. We’re almost finished with the interview, and I gotta tell you, I like your mettle.” I say, “Now about your family...”

“Yes. We’re the Cupressaceae of The Cupressaceae. I’m sure you’ve heard of us,” the voice says with a certain nasal quality, “we’re an old family with a rich heritage.”

“Yeah, well that’s not what I hear,” I reply, “I’ve heard I can find your type just about anywhere. Isn’t it true your family is found pretty much throughout the Northern Hemisphere? It seems to me like your family gets around quite a bit.”

“It’s all part of our adaptability, and a plan far greater than you would ever understand. And it would have succeeded by now if it hadn’t been for those damn flowers... But, I digress; my family includes all junipers, and our first cousins the cypresses. The other Pinales have formed their own families.”

“Pines wouldn’t let you in, eh?”

“I’m sure,” it sniffs.

“Come on now, if you’re gonna join on here you’ll need a thicker bark than that. We kid around a lot on these benches. Now, I know your heritage, but tell me about yourself. Who the heck are you?”

“My short name is *Juniperus sargentii* variety ‘Shimpaku’, although there is a lot of speculation about my name. It seems my ancestors weren’t always so careful about whom they socialized with, and, I must admit, there may have been a significant amount of mutation in my past.”

“Nooooo,” I mock, “a mutant? Wow, you’re like an X-tree aren’t you? Well, we won’t hold that against you here. So Ms. Eukarya Plantae Pinophyta Pinopsida Pinales Cupressaceae *Juniperus sargentii* var *Shimpaku*...”

“Please, call me ‘Shimp’.”

“Well Shari, ‘Shimp’, I think you’d fit right in here, how’d you like to dig your roots in here and call it home?”

All living organisms on Earth are separated into very well defined categories. The first is:

Domain:

There are usually considered to be three domains.

Eukarya is the one that contains what most people would consider to be plants and animals. The other two are:

Kingdom:

Yes there is an Animal Kingdom, Animalia, as well as a Plant Kingdom, Plantae.

Division/Phylum:

Division is used for plants, phylum is used for animals. Who knows why!

Class:

Various units of Div.

Order:

Various units of Class

Family:

Various units of Order

Genus:

This is the first name we see *in the scientific name of things*. It is the one *that is capitalized*. Like 'Juniperus' in 'Juniperus sargentii', or 'Homo' in '*Homo sapiens*' (*man*).

Species :

This is the second name in the scientific name, sargentii or sapiens above, No Capitals.

Then you can have infinite varieties that are normally preceded by var. If all of this seems complicated, it is actually meant to simplify things, and does, once you get used to the terminology and the different categories. And, actually, it can get even more specific than outlined above. The Genus Juniperus contains three sub-sections: Juniperus, Sabina, and Caryocedrus. In fact, the plants that we normally use in bonsai are not even in the section Juniperus, but in Sabina. Juniperus contains the Common Juniper that is sometimes used in bonsai, but not nearly as often as those species found in Sabina.

Newcomers to horticultural endeavors are often told to be familiar with scientific names to help clear up any discrepancies there may be with common names that are used for more than one species. This is usually a lousy reason to give newcomers, however, because they are rarely confronted with these ambiguities. Common names tend to be regional so everyone they encounter knows exactly what plant they are talking about. Thus, there is little motivation to learn scientific names.

Let's see if we can provide a better reason. Learn scientific names, not so you learn to tell plants apart, but so that you can group them. This will better enable you to know how to care for your plants, diagnose problems, and have healthier, better bonsai.

Australian Pine and Japanese Black Pine both make wonderful bonsai, but they have nothing in common. The Japanese Black Pine is from the same Domain, Kingdom, Division, Class, and Order as our friend 'Shimp' above. They actually have a lot in common, such as the time of year to repot and collect, and the watering they prefer. Whereas an Australian Pine might be from the same Domain and Kingdom, but it is from a totally different Division (Magnoliophyta). This means Australian Pines are flowering plants. That's just about as unrelated to conifers as you can get. JBP and junipers prefer to be repotted in cooler months, but like many tropical flowering plants, you are probably better off doing root work on Australian Pines in summer months.

So study the family trees of your trees. What you may learn just might surprise you.

'Hey,' by now you're all yelling, 'this was supposed to be about junipers, what gives?'

We just took a small detour, you know, like one of those errands you've got to run before the real trip starts. We're ready to take off now, but we can't promise there won't be side excursions along the way.

Found in Citrus County about 2001, it was about 8 feet tall. Cut to 3 feet, and then to 8 inches a year later. Estimate 7 years old, looks like 70, great texture, *difficult to keep healthy*.

There are twelve species native to North America. They are:

Juniperus ashei(Ashe's Juniper)

Juniperus californica(California Juniper) a great species for bonsai, but not in Florida.

Juniperus communis(Common juniper) *and the only one of the North American Junipers in the section Juniperus all others are Sabina.*

Juniperus deppeana(Alligator Juniper)

Juniperus flaccida(Drooping Juniper)

Juniperus horizontalis. This species is not normally used for bonsai although some of its crosses are.

Juniperus monosperma(One-seed Juniper)

Juniperus occidentalis(Western Juniper)

Juniperus osteosperma(Utah Juniper)

Juniperus pinochotii(Pinchot Juniper)

Juniperus scopulorum(Rocky Mountain Juniper),an outstanding species for bonsai, although its adaptability to Florida remains to be seen. Even though the species may not be suitable here, it has hundreds of important crossed varieties commonly *found in nurseries* and useful for bonsai. Phitzer juniper is a cross often seen in garden centers.

Juniperus virginiana(Eastern Red Cedar). A Great bonsai species. Excellent specimen for use in forest and group plantings.

Although North America has some great species of juniper, those that work best for bonsai, and that we most often use are crosses of Juniperus chinensis, the Chinese Juniper. Some consider our friend 'Shimp' from above to be a variety of Juniperus chinensis. Here in Florida, we are almost exclusively limited to varieties that are related to chinensis. Very rarely will you be able to know the exact species and/or variety of your junipers. They cross and mutate readily, and the nursery industry has created thousands upon thousands of varieties. When it gets down to the species, even the taxonomists have a hard time agreeing. But one thing we do know is that they are all from the genus Juniperus, so their care is going to be very similar. What will be more telling in our use of junipers as bonsai is the growth type they exhibit.

"Now about those amenities and benefits..." the voice says.

"Yeah, yeah, we'll get there, just be patient..." I tell it.

The next part of this article on Junipers, in Nov: The growth types, care and maintenance, diagnosing and addressing problems, species (varieties) suitable for Florida, and more! The author welcomes comments and questions regarding any aspect of this article or about junipers.