

Pre-Conference Paper:

How Do We Get New Bamboos?®

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We buy or trade for them. We can bring new bamboos from overseas, but that requires an import facility and a permit, not a quick or easy task. We can grow from seed if available, and the problem with this is the availability of seed. And, with the very long period between bamboo flowering, seed availability is rare. Watching for sports in existing plants is also a choice.

Hybridization is how many new plants are created, but bamboos with such a long interval between flowering, there has been very little crossing, none in the U.S. or Europe as far as I know. There are thought to be a few naturally occurring hybrids. *Semiarundinaria fastuosa* is thought to be one. *Hibanobambusa tranquillans* is another. In the mountains of Costa Rica there are some chusqueas that have hybridized.

When we grow bamboo seeds we watch for variability. The first bamboo I grew from seed was *Phyllostachys vivax*, as we found it flowering soon after I joined the American Bamboo Society. There seemed to be very little variability, until I found one with dark blotches on the culm. As a member of the bamboo society I was able to get seeds of several different bamboos over the years, and now that we have over 300 different bamboos we usually have some bamboos producing seed. Of course, having bamboo flower is not always desired as the flowering plant may die or at least be very drastically depleted. And, if it is a special form or clone there is a chance that it may be lost.

Phyllostachys aureosulcata, especially f. *spectabilis* is a bamboo that flowers sporadically. Since *P. aureosulcata* f. *spectabilis* is a form of spectacular color, gregarious flowering could cause that clone to be lost; we, of course, do not want that to happen. We have lost a couple of very attractive bamboos in the past due to flowering such as, *P. aurea* 'Albovariegata' and *Sasa senanensis* f. *nobilis* (syn. *S. megalophylla* 'Nobilis'). The *P. aurea* recovered, but only as a green form. The 'Nobilis' just died. Before I became involved with bamboo, *P. bambusoides* 'Castillonii' flowered and was lost in the U.S.A. It was imported again in the early 1980s.

We always watch for anything unusual in all of our bamboos, but it is with the seedlings that we feel we have a better chance of finding something new and interesting. *Fargesia murielae* has finally finished flowering and we have a multitude of seedlings. Some of these have been planted at the nursery to watch for traits of interest. We now have *F. nitida* flowering and are watching the babies grow. There are a quite a number that are variegated. Most will turn green as they grow, but we are hoping that some will mature with nice variegation. We have found variegated *F. murielae* and *F. dracocephala*. Variegation of course is not the only thing we are looking for. With the clumping bamboos we are looking for plants that are more sun tolerant as most of our hardy clump types grow better with protection from hot sun. We have selected a very upright clone of *F. murielae*. It may not have the same weeping beauty of *F. murielae* which is commonly known as umbrella bamboo, but as a screening bamboo it may be very valuable. We are also looking for bamboos of exceptional hardiness.

There are a number of named clones of *F. nitida*, one of our oldest and most important clump-type bamboos. They are thought to have originated from seeds collected in the

1880s. Several of these clones have started flowering. As you may know, when bamboos flower, all closely related plants may flower at about the same time. We expect most of the old clones of *F. nitida* to flower and perish over the next few years. *Phyllostachys* and other spreading bamboos often recover vegetatively, but we think fargesias will set large amounts of seed and the plant will die.

Bamboo seeds usually ripen in just a couple of months after flowering. The seeds are ripe when they can be easily shaken from the plant. Collecting bamboo seeds can be very easy, just shake the plant on a tarp when they are ripe. Bamboo seeds are generally not very long-lived and should be planted promptly.

Bamboo seeds vary immensely. Some are very tiny and the largest, *Melocanna baccifera*, has seeds almost as large as a pear; they often germinate while still on the parent plant. Seeds of *Chimonobambusa* (syn. *Qiongzhueta*) *macrophylla* f. *intermedia* are another bamboo with large seeds. Some that I sent a friend in Europe germinated before they arrived. We have planted some seeds to have a few germinate and then the bulk of them germinate about a year later.

A few years ago *P. aurea* 'Albovariegata' flowered. As we expected, the seedlings were not variegated. We had some that seemed extremely dwarf and we were excited, but we were unable to get them to grow. The dwarfing seems a bit too strong. We are very happy with one seedling; the new culms are densely coated with a blue-gray wax giving it a ghostly appearance. It is nice enough that we have named it for our late, dear friend "Dr. Don" Emenhiser. Another *Phyllostachys* that recently flowered is *P. flexuosa*. From that we have one we call 'Spring Beauty'. It is highly variegated in the spring. The culms which are still small can be green, yellow, or striped with both colors. Like many bamboos with yellowish culms they turn a beautiful reddish orange for a while in the spring. One bamboo sport we have found, *P. vivax* 'Huanwenzii', which is a sport of *P. vivax* f. *aureocaulis* — a gold form of *P. vivax*, is green with a yellow sulcus. But, we have some that were discovered by others, such as *P. vivax* 'Huanv Inversa', which we now call kimmei vivax. It is yellow with a green sulcus. Both *P. bambusoides* 'Richard Haubrich' and *P. bambusoides* 'Kawadana' are bamboos that were found at the base of flowered *P. bambusoides* 'Castillonii'.

Another terrific bamboo found as a sport is *P. aurea* 'Koi', a form with a yellow culm and green sulcus. This colorful form was found as a sport in a private garden in La Jolla, CA. It has not been found in Japan or in China where the species originated. Sometimes we see new culms of interest that we hope we can preserve as a new cultivar. This is usually not successful, but we keep trying. Many of the more interesting bamboos from overseas were probably sports found by others.

My favorite bamboos are the large running bamboos that make a grove you can walk into and they do not require as much space as some might think. Moso, *P. edulis* is my favorite. However, what is easiest to sell are the clumping bamboos, as many people are fearful of running bamboo.

Proper placement of bamboo is important. Running bamboo needs to be planted with some preparation or planning to assure that it will stay where it is wanted. Some, like most of our fargesias need shade; others need intense sun for color (e.g., 'Red Spectabilis'). Some tolerate wet soils and some have air canals in the rhizome while others do not. Some are good in windy areas and others not. There is a vast difference in temperatures bamboos tolerate. Some of the fargesias can live in Nova Scotia but can not survive in the deep south. There are also bamboos that grow well in Miami, but not so well away from the beach in San Diego.