

Changes in tree names

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MOST CULTIVATED trees have one or more common names and nearly all have one or more botanical names (a Latin binomial composed of first a genus name followed by a species name). Common names usually do not change but have several shortcomings. Common names for the same species can vary from place to place, a species can have more than one common name and more than one species can share the same common name, common names may not be understood by those unversed in the language of the name, common names frequently are not descriptive and can even be erroneous or misleading, common names typically provide no information about the systematic relationships of the tree with related species, and there are no rules governing the use of common names.

Figure 1. *Platanus × hispanica* is the new, accepted name for this tree in Lakewood, CA that was formerly known as *Platanus × acerifolia*.



In contrast, botanical names sometimes change but they have several advantages. A botanical name for a species does not vary from place to place, a species can have only one accepted botanical name and only that species can have that name. Botanical names are understood worldwide regardless of the spoken language, botanical names are often descriptive of the species and provide information about the relationships of the tree with related species, and there is a set

atic order that reflects evolutionary relationships among species, genera, and families, arborists can sometimes glean or extrapolate additional information from the name to enhance their knowledge about the culture and management of a little-known tree, including growth patterns and pruning, pest and disease resistance, litter potential, esthetic qualities, and soil, nutritional, and water requirements, simply from already knowing its close relatives.

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of rules or a code governing the use of botanical names. Thus, arborists and related professionals frequently use and rely on botanical names.

Unfortunately, one of the most frustrating aspects of botanical names that confront arborists is that they sometimes change. Changes in botanical names of trees significantly impact arborists and other professionals in the tree and landscape management industries because they must learn new botanical names, change documents, inventories, and databases to reflect the new names, prepare new labels and tags, and update references and cross-reference old names. All this work takes time and energy and has a cost associated with it.

However, arborists and related professionals will find it advantageous to accept, learn, and use the new botanical names to ensure preciseness and ease of communication. Also, because botanical names are structured in an hierarchical, system-

Why botanical names change

Three primary reasons are responsible for changes in botanical names and two of the three are based entirely or partly on the concept or rule of priority of publication of a name, which is that the oldest, valid name usually is the accepted name. The three reasons that botanical names change are:

1. ignorance of earlier names;
2. new interpretations and classifications of species and genera;
3. misidentification.

Ignorance of earlier names

Sometimes plants end up with more than one botanical name, which is not permitted according to the rules. This situation usually happens when a botanist names a new species not knowing that the species already has a valid, accepted name. In these cases, because of the rule of priority of publication, the oldest name takes priority and is the accepted name and later names become synonyms.



Figure 2. (Above left) The new accepted name for this *Chorisia speciosa* in Los Angeles, CA is *Ceiba speciosa*.

Figure 3. (Above right) All *Callistemon* were transferred to *Melaleuca*, so the new, accepted name for these *Callistemon citrinus* in Seal Beach, CA is *Melaleuca citrina*.

For example, the London plane tree, *Platanus × acerifolia* (Fig. 1), a name of which most of us are familiar, was named and described in 1805. However, the same hybrid species was named and described as *Platanus × hispanica* 35 years earlier in 1770; thus, this earlier name, although not well known, becomes the accepted name and *P. × acerifolia* is relegated to a synonym.

New interpretations and classifications

Recent rapid advances of DNA sequencing and other molecular techniques have allowed botanists to elicit and accumulate new information about how plants are evolutionarily related, which has led to new systematic classifications of species and even genera and families. For example, new data has revealed that the floss silk tree, *Chorisia speciosa* (Fig. 2), and other species in the genus, are more closely related to trees in the genus *Ceiba*, so closely, in fact, that they should be included in *Ceiba*. Because *Ceiba* is the older name, it has priority and the species of *Chorisia* were recently transferred to *Ceiba*. Thus, *Ceiba speciosa* is now the accepted name and *Chorisia speciosa* is relegated to a synonym. Similarly, all *Callistemon* (Figs. 3-4) have been transferred to *Melaleuca* and all *Talauma* (for example *T. hodgsonii*) to *Magnolia*, and

many botanists feel that all *Michelia* (for example *M. alba*, *M. champaca*, and *M. doltsopa*) should also be transferred to *Magnolia*.

In contrast, sometimes this new information shows that some species in a genus are more distantly related to the other species, and they should be separated out and placed in a differ-

ent genus. If there is no existing genus into which to place these segregate species, then a new genus must be erected for them. The transfer of some well known species of trumpet tree, *Tabebuia*, to a new genus, *Handroanthus*, is an example. Thus the accepted names for the yellow trumpet tree, *Tabebuia chrysotricha* (Fig. 5), the pink

Figure 4. (Below left) The new, accepted name for these *Callistemon viminalis* in Santa Barbara, CA is *Melaleuca viminalis*.

Figure 5. (Below right) Some *Tabebuia* were transferred to *Handroanthus*, so the new accepted name for this *Tabebuia chrysotricha* in Bellflower, CA is *Handroanthus chrysotrichus*.





Figure 6. (Above left) The new, accepted name for this *Tabebuia impetiginosa* at The Arboretum in Arcadia, CA is *Handroanthus impetiginosus*.

Figure 7. (Above right). Some *Eucalyptus* were transferred to the new genus *Corymbia*, so the new, accepted name for these *Eucalyptus citriodora* in Lakewood, CA is *Corymbia citriodora*.

Table 1. Name Changes in Some of the More Common Landscape Trees

Common name	Previous botanical name	New, accepted botanical name
bottlebrush	<i>Callistemon citrinus</i>	<i>Melaleuca citrina</i>
weeping bottlebrush	<i>Callistemon viminalis</i>	<i>Melaleuca viminalis</i>
floss silk tree	<i>Chorisia speciosa</i>	<i>Ceiba speciosa</i>
white floss silk tree	<i>Chorisia insignis</i>	<i>Ceiba insignis</i>
Monterey cypress	<i>Cupressus macrocarpa</i> (Fig. 9)	<i>Hesperocyparis macrocarpa</i>
lemon-flowering gum	<i>Eucalyptus citriodora</i>	<i>Corymbia citriodora</i>
red-flowering gum	<i>Eucalyptus ficifolia</i>	<i>Corymbia ficifolia</i>
spotted gum	<i>Eucalyptus maculata</i>	<i>Corymbia maculata</i>
London plane tree	<i>Platanus × acerifolia</i>	<i>Platanus × hispanica</i>
fern pine	<i>Podocarpus gracilior</i>	<i>Afrocarpus falcatus</i>
Chinese tallow tree	<i>Sapium sebiferum</i>	<i>Triadica sebifera</i>
yellow trumpet tree	<i>Tabebuia chrysotricha</i>	<i>Handroanthus chrysotrichus</i>
pink trumpet tree	<i>Tabebuia impetiginosa</i>	<i>Handroanthus impetiginosus</i>
Montezuma cypress	<i>Taxodium mucronatum</i>	<i>Taxodium huegelii</i> (Fig. 11)
Brisbane box	<i>Tristania conferta</i>	<i>Lophostemon confertus</i> (Fig. 12)
water gum	<i>Tristania laurina</i>	<i>Tristaniopsis laurina</i>



Figure 8. (Above left) The new, accepted name for this *Eucalyptus ficifolia* in Los Alamitos, CA is *Corymbia ficifolia*.

Figure 9. (Above right) *Hesperocyparis macrocarpa* is the new, accepted name for this tree in Strybing Arboretum at Golden Gate Park in San Francisco, CA that was formerly known as *Cupressus macrocarpa*.

trumpet tree, *T. impetiginosa* (Fig. 6), are now *Handroanthus chrisotrichus* and *H. impetiginosus*, respectively, and the two *Tabebuia* names are now synonyms. Similarly, some of the best known eucalypts, the picturesque lemon-scented gum, *Eucalyptus citriodora* (Fig. 7), and the showy and colorful red-flowering gum, *E. ficifolia* (Fig. 8), have been transferred to the new genus *Corymbia* and are now known as *Corymbia citriodora* and *C. ficifolia*, respectively.

Similarly, the large genus *Acacia* has been split into several genera, to the sometimes outraged consternation and angst of many botanists, horticulturists, and arborists. *Acacia* has been retained for most of the roughly 970 Australian species with only a few outliers in the Pacific Islands, Madagascar, and Asia. Segregate genera from *Acacia* include *Acaciella* (15 species, Americas); *Mariosousa* (13 species, Americas, including the handsome, wispy, ghost-like *M. willardiana* [formerly *Acacia willardiana*]), *Senegalia* (about 200 species, pantropical but many in Africa), and *Vachellia* (pantropical, including the sweetly fragrant *V. farnesiana*, [formerly known as

Acacia farnesiana]). However, a move is afoot to retain the name *Acacia* for the African species, so the final word may not yet be in on this matter.

Misidentification

When plants are brought into cultivation they may have been misidentified and given and grown under an erroneous name. Once a plant appears in cultivation and is associated with a specific name, it is a difficult and sometimes lengthy process to have the correct name accepted, even when the original name can be shown to be erroneous. For example, the brush cherry is frequently but erroneously grown and sold as *Syzygium paniculatum*, which is a rare species in California. The correct name for nearly all trees grown as the brush cherry in California is *Syzygium australe*. Similarly, recent work has revealed that mostly only the red-flowering gums of smaller habit and red flowers are actually *Corymbia ficifolia* (formerly *Eucalyptus ficifolia*) while the larger trees with white, pink, or orange flowers that have been referred to *C. ficifolia* are really another species, *C. calophylla* (formerly known as *Eucal-*

pytus calophylla) or hybrids between the two species.

In most cases of name changes described above just the genus name changed while the species name remained the same. However, in some cases, such as with the fern pine (Fig. 10) where *Afrocarpus falcatus* is now the accepted name for what we once called *Podocarpus gracilior*, both the genus and species names changed.

How to keep up to date with tree names

Arborists and related professionals can easily check on plant names and keep up to date with changes by visiting one or more of the on-line plant data bases:

1. <http://www.theplantlist.org/>
2. <http://www.ipni.org/index.html>
3. <http://www.tropicos.org/Home.aspx>
4. <http://www.cpbr.gov.au/apni/>
5. <http://sciweb.nybg.org/Science2/vii2.asp>

On-line databases also exist for specific groups of plants, like monocots, palms, legumes, and Compositae



Figure 10. (Above left) The new, accepted name for this *Podocarpus gracilior* in Downey, CA is *Afrocarpus falcatus*.



Figure 11. (Above right) *Taxodium huegelii* is the new, accepted name for this tree at The Huntington in San Marino, CA that was formerly known as *Taxodium mucronatum*.

Figure 12. (Below left) The new accepted name for this *Tristania conferta* in Monterey Park, CA is *Lophostemon confertus*.



(Sunflower family) among others. Keep in mind, though, that published changes or new interpretations of botanical names often take months or years to show up in on-line databases and years to gain acceptance and common usage in the nursery and landscape industries. **Table 1** summarizes more recent botanical name changes in some of the more common landscape trees.

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References

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Ritter, M. 2011. *A Californian's Guide to the Trees Among Us*. Heyday, Berkeley, CA.

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