**Aesculus hippocastanum**: The Handsome (and Useful) Horse Chestnut

Klaus K. Loenhart

E. H. Wilson, plant collector, connoisseur of trees, and keeper of the Arnold Arboretum, once wrote that “if a census of opinion were taken as to which is the most handsome exotic flowering tree in the eastern part of the United States there is little doubt but that it would be overwhelmingly in favor of the Horsechestnut.” Certainly my vote for the most exotic flowering tree anywhere would go to *Aesculus hippocastanum*: it was the first tree species to catch my attention when I was a child and later acquaintance has only strengthened my attachment. Perhaps the most striking feature of the tree is its blossoms: upright candelabra distributed in a pattern of almost geometric precision throughout the towering mounds of foliage. My childhood interest was only incidentally related to the flowers however. I grew up in
the countryside of Bavaria, where as kids we collected huge numbers of horse chestnut seeds to feed to deer during the winter.

Later I became familiar with the horse chestnut in another context. An unwritten rule in Bavaria decrees that the horse chestnut—and only the horse chestnut—must be planted in all beer gardens, both to provide shade and to demonstrate that the establishment properly upholds the traditions of beer and beer gardens. Horse chestnut trees, many of them the variety Aesculus x carnea ‘Briotti’, can therefore be found in all of the 172 beer gardens within the city limits of Munich—even those in the most crowded central area. The largest of them can be a hundred feet tall with a single tree sometimes shading the entire garden.

The horse chestnut, rather than some other tree, became the symbol of Bavarian beer gardens for several good reasons. It is easily raised from seeds; it can be transplanted without great difficulty if the seedlings are properly handled; it is adaptable to a range of pH values; and it grows rapidly. Not least, its flowering season, in mid May, coincides with the beginning of the beer garden season, which draws huge crowds of people into the breweries’ outdoor spaces.

But the very specific preference for horse chestnut also has historical roots. Beer gardens were founded around 1720, when the brewing industry began to flourish. Because brewers needed to keep huge amounts of ingredients on hand, they built underground vaults to provide the required space and moisture. Constant temperatures are critical during storage, and since Aesculus hippocastanum comes into full leaf just as the May sun begins to heat up the ground, groves of horse chestnuts were planted on top of the cellars to guarantee consistent temperatures in all seasons. Thus, Bavaria’s beer gardens became some of the first rooftop gardens known, and the horse chestnut an early device for passive air conditioning.

Because the horse chestnut has been so successfully grafted onto the important tradition of the beer garden, most Bavarians assume that it is a native species. Aesculus hippocastanum is native to the Balkan peninsula, however, and was not introduced in western Europe until the mid 1550s, where it was quickly adopted. In 1664 John Evelyn was writing, “This tree is now all the mode for the Avenues to their Countrie Palaces in France.” And it has not lost favor in Europe despite its many shortcomings, as noted by John James in 1712:

I cannot deny but the Horse-Chestnut is a handsome Tree; ‘tis certain it grows very upright, has a fine Body, a polish’d Bark, and a beautiful Leaf; but the Filth it makes continually in the Walks, by the Fall of its Flowers in the Spring, its Husks and Fruit in the Summer, and its Leaves in the Beginning of Autumn, mightily lessens its Merit: Add to this, that it is very subject to May-Bugs and Caterpillars . . . that it grows but to a moderate Stature, lasts but a very little while, and that its Timber is of no manner of Profit.

It is true that the wood of the horse chestnut has little or no commercial value: it is soft, lacks strength and durability, and burns badly. Furthermore, it does not cut cleanly and decays rapidly. Nor are horse chestnuts used in refores-
tation, being considered "principally unimportant forest trees, with light, soft, coarse-grained, perishable wood."4

But ever since the horse chestnut was introduced, Europeans have found countless uses for it. In the form of charcoal, its wood has provided both fuel and gunpowder. Tanners and dyers (yellow) have used the bark, and its grated nuts will bleach flax, hemp, silk, and wool. An infusion of horse chestnuts will expel worms from the soil and kill them when soaked in it. Vermin find highly offensive the combination of a powder of its dried nuts with alum-water. Add to that combination two parts of wheat flour and you have a strong paste for bookbinding.

It is reported that when the horse chestnut’s fruits are given to cows in moderation, both the yield and the flavor of their milk is enhanced. Bavarian deer relish the horse chestnut’s fruits, but before pigs will ingest them, they must be steeped in lime-water.5 Humans too find it hard to get excited about their taste. Nevertheless, during World War II the nuts were roasted and combined with various kinds of grain for use in Ersatzkaffee (coffee substitute). Today Ersatzkaffee, still containing roasted horse chestnuts, is offered at high prices in Germany’s eco-stores. It would be unthinkable in Bavaria, but in Ireland the aromatic young buds have been used in beer as a substitute for hops.

Those uses aside, perhaps the greatest demand for the tree’s products has come from pharmacology. The horse chestnut’s seeds and bark have long been widely used in European traditional medicine, and a visit to a medical database such as BIOSIS will show that the practice continues today, chiefly for relief from edema but also for hemorrhoids. Extracts of horse chestnut are also recommended for certain cosmetic problems, among them cellulite and hair loss. Another extract of the bark has been shown to protect against UV damage, chiefly because of its antioxidizing properties. And I should add a use that the scientific literature does not mention. My own great-grandmother ferments the nuts for a liquor that yields not only alcohol but also serves to relieve arthritic pain.

E. H. Wilson made the case for the beauty of Aesculus hippocastanum. I hope I’ve made a convincing, if not exhaustive, case for its usefulness, and that if a census of opinion were to be taken as to which is the most useful exotic flowering tree, if not in the eastern part of the United States then in Europe, you would find ample reason to vote for the handsome horse chestnut.

Endnotes
1 The Romance of Our Trees, 1920
2 Silva Or, A Discourse of Forest-Trees
3 A. J. Dezallier d’Argenville, Theory and Practice of Gardening, translated by John James, 1912
4 George Rex Green, Trees of North America, 1934

Klaus K. Loenhart is a practicing landscape architect and architect. He holds a diploma in architecture from the FHM Architecture School in Munich, as well as master’s degrees in architectural theory and in landscape architecture, both from the Harvard Design School.