'Little Madame', a New Vitex Release

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Species description: *Vitex negundo*, cut-leaf chastetree, is a deciduous multi-stemmed shrub or small tree used in landscapes. Plants bloom in late spring. Flowers are lavender and foliage is highly dissected. Height may reach 3 to 6 m with a spread of 5 to 8 m. This drought-tolerant plant may be grown in USDA cold hardiness zones 6A through 9B. During cold winters in zones 6 and 7, it may die back to the ground, but will likely re-grow from the roots and produce a flowering shrub during the following summer, as flower buds are formed on new growth.

Pedigree and history: Seeds from *V. negundo* 'Heterophylla' were irradiated with 3krad gamma radiation in 2006. Seeds were germinated and a plant with potential ornamental qualities was selected. This plant was propagated and planted in replicated plots in Griffin, Georgia (zone 8A) in 2009. Evaluations have continued for six years. This selection has been named 'Little Madame'[PPAF].

Description: 'Little Madame' is smaller than 'Heterophylla' and has denser, more compact form (Table 1, Fig. 1). Internodes are shorter on 'Little Madame' and multiple branches occur at the nodes (Table 2, Fig. 2), while 'Heterophylla' has the typical vitex pattern of two shoots per node. Both cultivars have palmately compound leaves, but 'Little Madame' has three to five leaflets while 'Heterophylla' has five leaflets (Fig. 3). The margins of the leaves of 'Little Madame' are entire or jagged, while those of 'Heterophylla are lobed (Fig. 3). Both cultivars bloom about the same time, from May to June in Griffin, GA. Panicles of 'Little Madame' are shorter in length, and the diameter of individual flower clusters on the panicles is smaller (Table 3). Both 'Little Madame' and 'Heterophylla have dark violet-blue flower color (Fig. 4).

Table 1. Height and width of V. negundo 'Little Madame' and 'Heterophylla' three years after planting in a field plot in Griffin, GA.

Entry	Height (cm)	Width (cm)
'Little Madame'	200	260
'Heterophylla'	260	322

Table 2. Means and standard deviations for number of branches per node and internode length of 'Little Madame' and 'Heterophylla' based on ten random samples from each plant in June 2014 in Griffin.

Entry	Number of branches at each node	Internode Length (mm)
'Little Madame'	5.8 ± 0.9 b*	18 ± 7.1 a*
'Heterophylla'	2.0 ± 0 a	48 ± 9.2 b

*Mean number of branches per node and internode lengths are significantly different at $P<0.0001$.

Fig. 1.' Little Madame' (top) and 'Heterophylla' (bottom). Note the smaller and more compact form of 'Little Madame'.

Fig. 2. 'Little Madame' (left) and 'Heterophylla' (right), showing shorter internodes and increased branching of 'Little Madame'.

Fig. 3. Foliage of 'Little Madame' (top) and "Heterophylla' (left). Note differences in leaflet number and leaf margins.

Table 3. Means and standard deviations for panicle length, diameter, and number of subpanicles per panicle, based on ten random samples on each plant in June 2014 in Griffin.

Entry	Mean panicle length (cm)	Mean panicle diameter (cm)	Number of subpanicles per panicle
'Little Madame'	12.5 ± 1.9 a*	1.2 ± 0.3 a**	Two to four
'Heterophylla'	15.1 ± 2.6 b	1.7 ± 0.3 b	Two to six

*Mean panicle lengths are significantly different at $P<0.05$;
**Mean panicle diameters are significantly different at $P<0.01$.

Fig. 4. 'Little Madame flowers (left) and 'Heterophylla' (right)'

Propagation: 'Little Madame' sets very few viable seeds, but is readily propagated through cuttings. Collect two-node cuttings during the summer months and trim to reduce the canopy. Insert cuttings into a well-drained rooting mix with one node under the surface of the medium. Place the cuttings on a mist bed. Rooting is evident in three to four weeks. Transplant to well-drained medium in one-gallon container. Place in full sun at temperature of 21 to 32 °C. From rooting to saleable plant takes four to six months. This cultivar is licensed to EuroAmerican.