

Introducing 'Venus' Sweetshrub PPAF

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Index Words: *Calycanthus floridus*, *Calycanthus chinensis*, *Calycanthus occidentalis*, *Sinocalycanthus chinensis*, \times *Sinocalycalycanthus*, plant breeding

Nature of Work: The sweetshrubs (*Calycanthus* L./*Sinocalycanthus* W.C. Cheng and S.Y. Chang) hold great promise as landscape shrubs offering fragrant flowers, attractive foliage, broad adaptability, shade tolerance, and excellent pest resistance. Although the different species and cultivars have merit in their own right, the development of \times *Sinocalycalycanthus* Lasseigne and Fantz 'Hartlage Wine' demonstrated the potential for further improving sweetshrubs through interspecific/intergeneric hybridization (1). This spectacular hybrid combines many of the best qualities of both parents with large, maroon, wine-red flowers that open widely with a subtle fragrance. 'Hartlage Wine' roots easily from cuttings and once established, plants can be very floriferous and extremely showy. Our recent efforts have focused on developing a wider range of sweetshrub hybrids with a greater diversity of desirable ornamental and commercial characteristics.

Results and Discussion: Over the last few years, we have successfully developed additional hybrids between *Calycanthus chinensis* W.C. Cheng and S.Y. Chang. and *Calycanthus floridus* L. and new hybrids between *Calycanthus chinensis* and *Calycanthus occidentalis* Hook. and Arn. Although most of these hybrids are extremely infertile, we have been able to produce a limited number of advanced generation hybrids that incorporate all three taxa. Many of these hybrids are just now blooming for the first time and the range of characteristics and the potential for new nursery crops is impressive. We selected one exceptional new hybrid for release: *Calycanthus* 'Venus' PPAF.

There is ongoing discussion about the classification and nomenclature of the Chinese wax shrub. Some consider that the proper classification is in the genus *Calycanthus* (i.e., *Calycanthus chinensis*, W.C. Cheng and S.Y. Chang) while another treatment placed it in a separate genus (*Sinocalycanthus chinensis*, W.C. Cheng and S.Y. Chang). However, recent molecular phylogeny data (2) has indicated that this species is genetically embedded among other *Calycanthus* species providing strong justification to place the Asian species within the genus *Calycanthus*. Based on this treatment, the proper scientific name for this hybrid would be *Calycanthus* L. 'Venus'. If future taxonomic treatments place the Chinese wax shrub into the genus *Sinocalycanthus*, then the proper scientific name for this new hybrid would be: \times *Sinocalycalycanthus* Lasseigne and Fantz 'Venus'.

'Venus' is a complex hybrid, developed at NC State University, with the following pedigree (female parents listed first):

(*Calycanthus chinensis* x *Calycanthus floridus* 'Athens')

x

(*Calycanthus chinensis* x *Calycanthus occidentalis*).

The result is extremely unique for a sweetshrub. This medium-sized shrub produces large, ivory yellow buds that transform into large, magnolia-like, white flowers with yellow and purple infusions in the center (Fig. 1). The flowers have an enticing fragrance with aromas of strawberries, melons, and spices. Flowering is primarily in the spring, though additional flowers are produced throughout the growing season. 'Venus' roots readily (>95%) from firm, subterminal, softwood cuttings when treated with a basal dip of 5,000 - 10,000 ppm indole-3-butyric acid potassium salt in water.

Significance to Industry: There are tremendous opportunities for the development and improvement of new nursery crops through controlled hybridization. 'Venus' sweetshrub demonstrates the potential for reinventing sweetshrubs as mainstream nursery crops. Contact Thomas Ranney, tom_ranney@ncsu.edu for information on availability.

Literature Cited:

1. Lasseigne, F.T., P.R. Fantz, J.C. Raulston, and G.B. Straley.
xSinocalycanthus raulstonii (Calycanthaceae): A new intergeneric hybrid between Sinocalycanthus chinensis and Calycanthus floridus. HortScience 36(4): 765-767.
2. Zhou, S., S. Renner, and J. Wen. Molecular phylogeny and inter and intracontinental biogeography of Calycanthaceae. *In Preparation*.



Figure 1. Flower bud and mature flower of 'Venus' sweetshrub (*Calycanthus 'Venus'*) PPAF.