

## **Crapemyrtles, Past, Present and Possibilities<sup>®</sup>**

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### **SUMMARY**

My breeding efforts with crapemyrtle (*Lagerstroemia*) which has spanned 60 years. Important crapemyrtle breeders include Otto Spring, . Donald Egolf, David Chopin, Mike Dirr, Carl Whitcomb, Cecil Pounders, David Chopin, Bob Hambuchen, Dr. John Creech, and Ewa Nelson. Some of my efforts at Plants of Redlick have been developing compact forms with dark leaves. I have three distinct compact forms that may prove beneficial in providing new selections. For extending flowering, I am also working on improved length of flower bloom. Repeat blooming is related to sterility.

*Keywords:* Breeding, *Lagerstroemia*, plant breeders, woody plants,

### **INTRODUCTION**

A little background before we get started on the specifics of my breeding efforts with crapemyrtle (*Lagerstroemia*) which has spanned 60 years. I grew up in the Northwest corner of Arkansas and was exposed to horticulture at an early age. My dad was a fruit grower and had a nursery (Earl Brown Nursery) focused on fruits. Before enrolling at the University of Arkansas, I worked for Dr. Jack Hull starting in 1960. On my first day I was in a screen house making

crosses on blackberries. Under his direction I learned everything about pollen, seed processing and plant evaluation. As a result of this, I gained an appreciation of plant breeding.

Crapemyrtle since its introduction has long been associated with the Southern U.S.. Its ability to survive in heat and drought and provide a long bloom season of bloom has endeared it to landscapes where it is winter hardy. In the U.S., the genetic base was narrow and most selections were for flower color. Some of the first efforts to modify the crapemyrtle 'family' was finding and developing more compact forms. Mr. Otto Spring of Okmulgee, OK was among the first to exploit this trait. He developed compact forms that were later marketed by Monrovia Nursery as their Petite series. Mr. Spring described 'dwarf' as under 0.9 m (3 ft), 'midget' as under 0.4 m (15-in.) and 'wee wee' as under 10-13 cm (4 to 5 in.) from dormant pruning.

The University of Arkansas (UA) using material from Mr. Spring introduced a series of four crapemyrtles of which the most popular was 'Victor', a smaller growing red-flowered form. When the UA introductions were released, Dr. Al Einert said they just grew slower and were not true dwarfs.

Dr. Donald Egolf at the U.S. National Arboretum used a dwarf red from Otto Spring in his program to develop 'Chickasaw', a true dwarf. J.B. Fitzpatrick's nursery in Texas contributed several crapemyrtles as 'Low Flame', 'Royalty' and 'Pink Ruffles'. David Chopin introduced a series of low growing crapemyrtles. His 'World's Fair' selection made a hit at the 1984 World's Fair in New Orleans and several varieties are available today. Dr. Michael Dirr introduced the Dazzle<sup>R</sup> and Magic series with lots of appeal and many flower colors; Cherry Dazzle was one of the best.

The next major advancement was the introduction of new species, notably the introduction of *Lagerstroemia faurei* and *L. subcostata* complex. Dr. Egolf was working on

disease resistance and used the new species to start an explosion of new varieties. Most of these were tree types with improved disease resistance, attractive bark, and various flower colors.

My first major breeding effort used the first released hybrids and *L. subcostata* sent as a plant introduction (PI) to the University of Arkansas. From these crosses a few selections were made. When 'Tonto' was released it was crossed with the best reds available including 'Victor', 'Okmulgee' and two red selections, a dark and a bright red obtained from Mr. Spring. 'Freedom' (96-50) was the best selection from this population and is used as a parent in nearly all of my selections made since.

The next major advancement in the crapemyrtle family was Dr. Carl Whitcomb's new cherry red flower color. Again, a flurry of attempts was made to spread this color resulting in many new selections.

The latest new trait that has been impacting breeding programs is the 'black' dark leaf form found and expanded on by Dr. Cecil Pounders. My efforts now are developing compact forms with dark leaves. I have three distinct compact forms that may prove beneficial in providing new selections.

Another area that can be improved upon is the length of bloom. Dead heading has long been used to extend flowering but that method is not practical with a woody plant like crapemyrtle. Seedlessness would provide the same effect. A crapemyrtle I received from Otto Spring, which I refer to as O.S. Blue. It is nearly seedless and it offers heavy panicle re-blooming. I have never experienced a selection with more bloom over a longer season. 'Freedom' is a panicle re-bloomer also which contributes to its long season of bloom.

Polyploidy may provide some sterility. One selection I have appears to be sterile and blooms over an extended season with poor seed set. Early Bird™ White has a trait of late

flowering which is a result of axillary buds on leafy branches. This trait has been passed to F1 and F2 populations with increased bloom in late season.

As Dr. Dave Creech recommended several years ago, there are other opportunities with new selections having a good red flowered form and 'Natchez'-like bark. There is need for these tall tree type with dark leaves, and enhanced fall color. With few exceptions disease resistance is still poor in all pure *indica* varieties. Insect resistance can be found for Japanese beetles and work shows aphids have preferences. While screening efforts are being made, we need to find resistance to the crapemyrtle bark scale (CMBS).

Dr. Michael Dirr was recently quoted in a national magazine saying: "A major frustration in plant breeding is insufficient time to determine the true worth of a particular selection." Oh, how true this is with woody plant breeding!

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