Plant Exchange: preparation of bulked seeds representing the southern limit of native *Vaccinium fuscatum*, a diploid blueberry from Florida

Dr. Paul Lyrene, Emeritus Professor University of Florida

Dr. Kim Hummer Telephone: 541-738-4201 Nov. 7, 2019
USDA ARS National Clonal Germplasm Repository
33447 Peoria Road
Corvallis OR 97333

Dear Kim,

Here are the 50 grams of diploid south-Florida *V. fuscatum* seed I promised to send. There are 25 grams from Deep Creek females (separated into 2 identical packages for packing purposes) and 25 grams (divided into 2 packages) from the Lake Istokpoga females. If possible, please send some of these seeds to the Svalbard repository. You may also distribute these seeds to interested breeders or biologists. The information below can be stored along with the seeds:

The mother plants from which these seeds were harvested originated as softwood cuttings taken from 8 wild clones from the swampy margins of Lake Istokpoga in Highlands County Florida and 11 wild clones from near the Deep Creek Preserve, Arcadia Florida. These locations are near the southern limits of the range of native highbush blueberry in Florida.

These clones were 2 to 4 m tall in the forest and were selected for having the largest leaves (in an effort to minimize clones having *V. darrowii* introgression). These 19 clones were grown for 1.5 years in 5-gallon pots in Gainesville, Florida. In January, 2019, two plants of each clone were placed outdoors near a natural area on the campus of the University of Florida, Gainesville. The plants flowered heavily and were heavily pollinated by Bombus, Habropoda, and by honeybees. Little or no extraneous Vaccinium pollen would have been available to contaminate the polycross. Fruit set was very high on all plants. When the berries began to mature, the plants were moved to a screenhouse where they were protected from birds. Thousands of berries were harvested during a 6-week period starting in late April, 2019. Berries from the Istokpoga clones were kept separate from berries from Deep Creek clones. However, during the pollination period, all plants had been placed together and pollen from all clones would have been abundantly available to the bees. The number of berries harvested from each bush was not standardized, but an effort was made to harvest a large number of berries from each plant. The berries were composited into 2 groups: those from Istokpoga mother plants and those from Deep Creek mother plants. Seeds were extracted and dried.

Paul Lyrene, Nov. 2019

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Funding:

Table 1. Cost of the trip

Item	Cost	Comments
Travel expenses for Paul Lyrene	500.00	Travel to Southern Florida for collecting.

Germplasm obtained:

Table 2. Accessions:

PI Number	Local Number	Name	Pedigree
691859	CVAC 2375	*V. fuscatum*	Deep Creek female x Istokpoga male
691860	CVAC 2376	*V. fuscatum*	Deep Creek female x Istokpoga male
691861	CVAC 2377	*V. fuscatum*	Istokpoga female x Deep Creek male
691862	CVAC 23787	*V. fuscatum*	Istokpoga female x Deep Creek male

These photographs are of diploid V. *fuscatum* in the wild in Putnam County Florida, which is well north of where the plants grew from which the seeds derive, but the pictures are from plants of the same taxon (Florida diploid *V. fuscatum*) and if I had made the photos in the far south, they would have looked the same. Paul

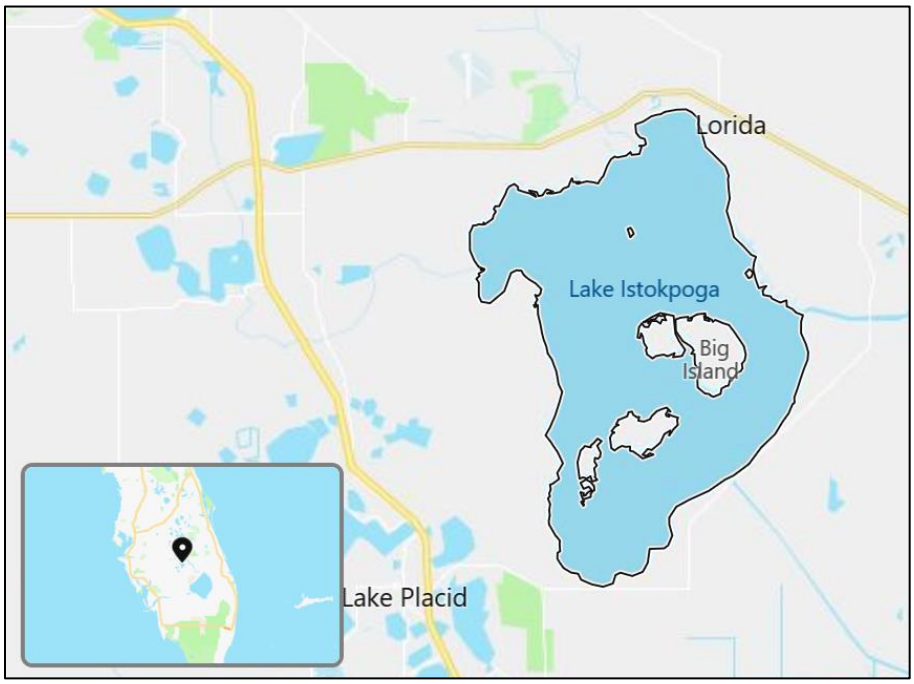
Vaccinium fuscatum, diploid plant and fruiting branch.

Vaccinium fuscatum diploid plant and fruiting branch.

Vaccinium fuscatum diploid plant and fruiting branch.

Vaccinium fuscatum diploid plant, leaves, and fruiting branch.

Vaccinium fuscatum diploid plant.


Lorida
Lake Istokpoga
Big Island
Lake Placid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CHARLOTTE CO.
Deep Creek Preserve