Short Note 2.1

Additional Notes on Canker War I

This note provides additional details on Canker War I. The program lasted about 21 years, from 1912 to 1933. Canker Wat II lasted approximately 10 years from 1984 to 1994. All totaled, the 31 years of eradication, and the Department did not have a lot to show for all this destruction and expense.

The Plant Act was passed in April 1915, providing for the creation of a State Plant Board, with the authority to impose quarantines. [2] The origin of citrus canker in Florida, coincides with the creation of today's Florida Department of Agriculture and Commercial Services (FDACS), with the Department of Plant Industry (FDACS/DPI) expanding on the original objectives of the State Plant Board in support of commercial nurseries, farms, groves and the horticultural industry.

The eradication program focused primarily on destroying nursery plants. Schubert et al states approximately 3 million nursery and 257,745 grove trees were destroyed in this period, which includes both healthy and infected trees. [1] Whiteside provided the following statistics on discovered infected trees as follows:

Table 1: Infected Nursery and Grove trees destroyed (Whiteside, 1986, ref. 3)

	Infected Nursery trees	Infected Grove trees
Before May 1, 1915	320,406	5,650
May 1, 2015 to Apr 30, 2015	21,264	5,567
1917- 1919	500	2,480
1920- 1933	1	1,518
Total infected trees	342,176	15,211

In review of Schubert and Whiteside's estimates, there would about 8.8 healthy trees for every infected tree for eradication within nurseries. In this setting, one would expect a much higher ratio. It is possible that Dr. Whiteside's estimate of infected trees prior to May 1, 1915 includes many healthy trees, resulting in a gross overestimation. It is likely there was poor accountability because the number of infected trees did not matter once it was decided the nursery had to be completely destroyed.

Also, state regulation of agriculture was in its infancy, as the Plant Act empowering the State Plant Board was not enacted until April 1915. I assume that the USDA were conducting surveys prior to this time and they may have inadequate resources to deal with the widespread outbreak.

Further, Whiteside expresses some surprise at how few infected trees were found in the groves [3] given how prevalent canker was in the nurseries. He notes that prior to May 1, 2015, there was unrestricted movement from the nurseries to the groves. But as stated above, the estimate of infected nursery trees may be in grossly overestimated.

Incidences of Citrus Canker

Maps of the discovered incidences of citrus canker were presented by Dr. H.E. Stevens in November 1915, in the University of Florida, Bulletin 128. [2] This historical document has been now posted, due to the cooperative effort of the University of Illinois at Urbana-Champaign and the Google, which has digitized and organized many historical records.

The map clearly shows the presence of citrus canker was concentrated in two areas, Miami-Dade County on the east coast, and the Pinellas and Highland Counties on the west coast.

Stevens notes, "No canker-infected trees really exist in any of the localities indicated, for all infected trees are burned on discovery. In most cases, the entire grove is burned if the trees are small. All properties where infection has been found have been quarantined and kept under observation until they are considered free from the disease."

The distribution of canker by county in Figure 1, clearly shows canker was most prevalent in Miami-Dade, Broward and Palm Beach counties on the east coast and Hillborough, and Pinellas counties on the west coast.

This is similar to the early discoveries of canker in Canker War III, with discoveries in Miami-Dade, Broward, Palm Beach, and Hillborough counties prior to year 2000. However, there are notable exceptions in Canker War III. Canker was first discovered in 1997 in Manatee County, and not discovered in Orange County (population ranked fifth) until 2002.

Figure 1: Map of Canker Distribution

DISTRIBUTION IN FLORIDA

The accompanying map (Fig. 2) shows the localities in Florida where citrus canker has been found. These include all infections that have been discovered since the disease was first introduced,

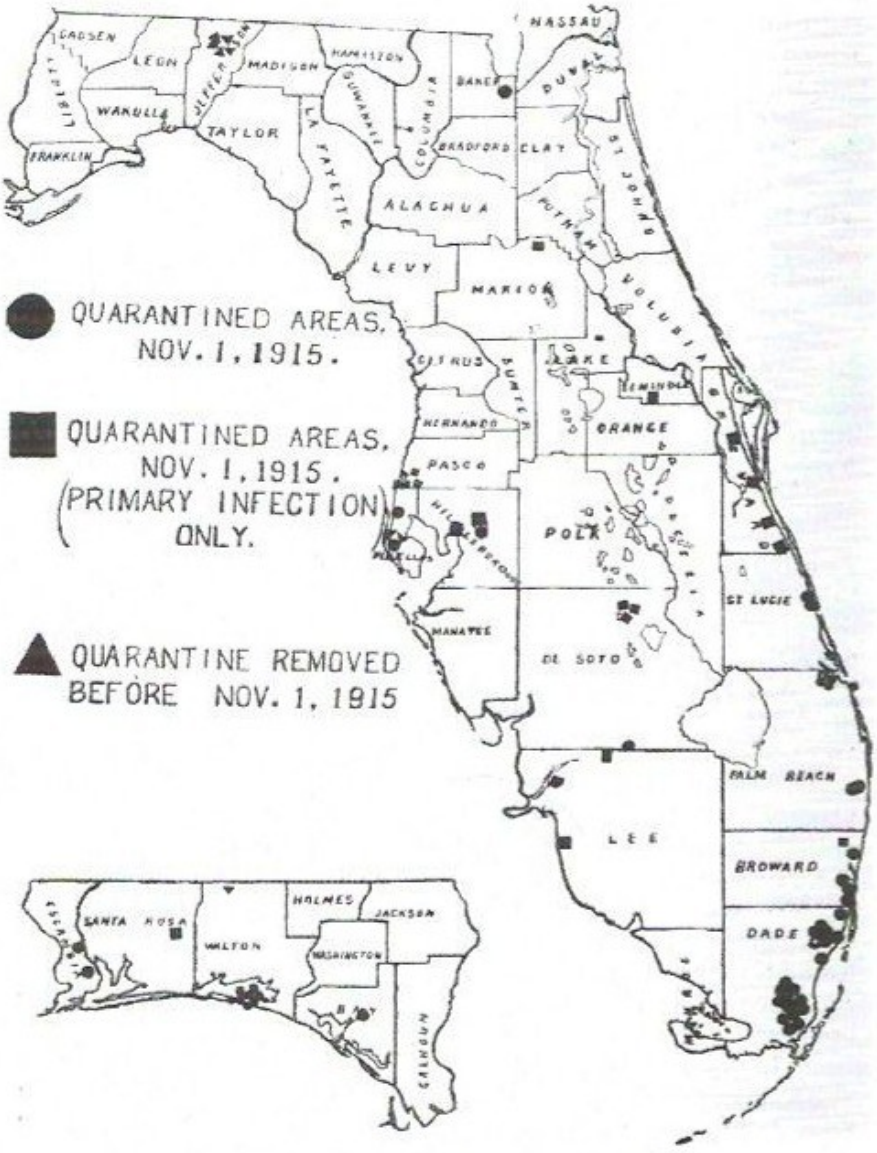

Fig. 2.—Distribution of Citrus Canker in Florida.

References:

1. Whiteside. J.O., September 1986, Citrus Canker, Some Facts, Speculations and Myths about this Highly Dramatized Bacterial Disease, Citrus and Vegetable Magazine.
2. Stevens, H.E., Citrus Canker III, University of Florida, Agriculture Experimental Center, Bulletin 128, November 1915. From University of Illinois Urbana-Champaign, and digitized by Google.