of the scale directly from the nursery, as the trees came from one that is known to have been infested at that time.

Barnesville:—At the meeting of the Farmers' Institute at Rockville, December 22nd, 1896, Mr. C. C. Mainhart, of Barnesville, told me, after looking at a specimen twig containing the San Jose scale, that he was of the opinion that he had the same insect upon young trees in his orchard. Upon request, Mr. Mainhart sent me some twigs cut from his Japan plum trees January 7th. The insect, as suspected, was the San Jose scale, and Mr. Mainhart was given due notice regarding it. I visited his place April 6th, 1897, and made an examination of his orchard. I found the pest upon about 50 plum trees, the attack being very much worse upon the Japan varieties—Burbank, Satsuma and Abundance, than upon Wild Goose and Marianna. None of the trees were dead, but several were so badly infested that they had made little or no growth, and looked very sickly.

I found the same scale upon seven peach seedling about two years old in the same orchard, but did not find it upon any trees in the old orchard in the immediate vicinity. All the trees were thoroughly washed with whale oil soap, and I understand from Mr. Mainhart, that he has almost entirely destroyed it. In reply to my recent letter of inquiry, he says December 8th: "The whale oil soap saved my trees. I have watched them carefully this summer, and while there are a few scales upon them, still they are few and far between, as compared with their condition this spring. I wish you could see the trees now that were so badly infested last spring. I gave them a double dose of whale oil soap and they have made an unusual growth.

"I wish to say, however, that the soap as I applied it, killed all the blossoms and fruit buds, but later, they put out a new growth, and I never had trees look any more thrifty. To give you an idea of the wonderful growth, will say that some of them have put out over five feet of new wood quite regular over the trees.

"On the whole, I am well pleased with my success. While there are some scales upon the trees, yet I believe that another application of the soap will entirely destroy them."

At the request of Mr. John W. Brown, who resides near Barnesville, Mr. Mainhart took me to his place to see some trees which he desired me to examine. I went over his entire orchard, and found one tree, an Idaho pear, which was very badly infested with the scale. A lot of damsons had been bought at the same time, but I could find no trace of the insect upon any of them. The infested tree was dug up and burned, and the others in the immediate vicinity were washed with whale oil soap for fear that some of the insects might have escaped us.

Mr. Mainhart then took me to the farm of Mr. C. C. Brosius, who had also made a purchase of trees two years ago, the most of which, from some mysterious cause, had died. Mr. Brosius was of the opinion that they had been killed on account of the dry weather that followed shortly after they had been planted. An examination of some of the dead trees showed that they were litterally covered with the San Jose scale, and those still alive, were also infested with the same pest. In all, Mr. Brosius had purchased about 75 plum trees, 100 pear trees,

and a few gooseberry and currant bushes. As noted above, all the plums and damsons were dead or badly infested with the scale, as were also all the currant and gooseberry bushes. I was unable to find any trace of the scale upon the pear trees planted at the same time in an adjoining orchard. The infested trees and bushes were in such a dwarfed and stunted condition, it was not thought worth while to try and restore them, and they were destroyed.

Brookville:—This outbreak was brought to my attention by Robt. L. Miller, who brought me a twig of an apple tree which had been referred to him by Mr. J. B. Hallowell, of Brookville. The twig was very badly infested with the San Jose scale. April 28th, 1897, I wrote Mr. Hallowell, stating that it would be to his interest to make every effort, without delay, to check and destroy this ravenous pest, and also made inquiry as to the number of trees in the orchard.

Under the date of May 4th, in answer to my query, Mr. Hallowell says: "Your esteemed favor of April 28th, duly received. The orchard contains about 75 apple trees, and a few pear and peach. 50 of these trees were planted in May, 1891, and 29 in April, 1893. I think several more are infested, though not so badly as the one, a cutting from which I sent you, though I lost one about three years ago, near the one now badly infested, and which I now believe had the same disease."

May 6th, I wrote to Mr. Hallowell, asking whether or not he would permit me to try some new soaps which had been made for me by the Powell Fertilizer and Chemical Co., of Baltimore, in an experimental way upon his trees. May 13th, Mr. Hallowell replied that he was entirely willing for me to try the experiments upon his trees, and suggested that I come to his place as soon as possible. I proceeded to the infested orchard May 15th, and began my experimental work the following day, which is reported in detail at another place in this report. I found the scale on 11 trees, two of which were very badly infested; one planted the spring of 1891, and the other April 15th, 1893. The trees made a beautiful growth, but two of them appeared to be diseased, and finally died two years ago, when they were dug up and burned. There is no doubt in my mind that the scale was introduced upon these trees, as those that are now infested are in the immediate vicinity of the places where the others were removed. Many of the twigs and limbs on the two badly infested trees were dead, and the limbs, in most cases, were literally covered. The insect was still present in this orchard August 28th, the time at which I examined a lot of twigs sent to me for that purpose. Other experiments with whale oil soap were performed in this orchard this spring.

Oakdale:—Dr. Mahlon Kirk, of this place, called the attention of Director Miller to several trees in his yard June 20th, 1897, which were supposed to be infested with the San Jose scale. The matter was referred to me by Mr. Miller June 21st, together with a specimen twig cut from one of the infested trees. I wrote Dr. Kirk the same day that the insect was the genuine San Jose scale, and gave him the information desired regarding it, and received the following communication from him June 26th: "Your letter of the 21st instant was duly received, for which I am much obliged. Mr. Miller examined the trees referred to, at my re-