**California Avocado Society 1948 Yearbook 33:96-98**

# Olive Scale on Avocados

**Dr. J. Eliot Coit**
*Fallbrook, California*

May 10, 1948

Dear Dr. Coit:

The best answer to your letter to me of April 30th seems to be to send you a copy of my letter of May 8th, 1945 to Mr. George Hodgkin, in which I summarized the only information I had on avocados as a possible host of olive scale. I quoted in full Dr. Stafford's last letter to me on this subject. A letter from me to Mr. Jack Shepherd of May 5th, 1944 gives some previous history of the trees sent to Fresno but throws no light on the possibility of damage to avocado by the scale. This letter was sent to him as Secretary of the California Avocado Society and you have doubtless seen it. I have no further information than that summarized in my letter of May 8th, 1945 to Mr. Hodgkin.

We are finding a considerable number of additional manifestations of olive scale here. Two spots around heavily infested plants have been found near San Fernando and three infestations have been recently found around nurseries that received infested trees from Fresno in 1941. Adding the two infested areas previously found—one in Belvedere Gardens and one in Glen-dale—we have found seven infested areas in the county scattered between San Gabriel and the south part of Los Angeles City. The chances of successful eradication here look very slim.

**HAROLD J. RYAN**
Agricultural Commissioner
Los Angeles County

**Mr. George B. Hodgkin**
*Calavo Growers*
*4803 Everett Avenue Los Angeles, California*

May 8, 1945

Dear George:

In September of 1941 arrangements were made with Dr. C. F. MacLeod, Entomologist of the University of California, to run some tests at Fresno with avocado fruits and avocado trees in the hopes of learning whether they might be susceptible to infestation by the olive parlatoria scale. You sent a flat of mixed avocados and the California Avocado Society sent six avocado trees, consisting of two Fuertes, two Dukes and two

Hellens. These went to Dr. E. M. Stafford of the University who was in charge of the experimental work at the Kearney Vineyard, Fresno.

On September 22nd Dr. Stafford wrote:

"A box of mixed avocados has arrived in good condition and I am trying to establish the olive scale upon them. At this time of year the numbers of infective stages of the olive scale are rapidly diminishing. However, I think there will be enough to make a good trial."

October 2, 1941 he wrote:

"I have received six avocado trees (2 Fuertes, 2 Duke, and 2 Hellen) from La Habra. The trees arrived in good condition and are now in a lath house where I plan to provide protection for them this winter. During this fall and next spring I will have abundant opportunity to see if the olive scale can establish itself on avocados."

In a supplementary report on host plants of **Paralotoria oleae** made by Dr. Stafford to the State Department of Agriculture in April, 1943 appears the following note under the title "Successful overwintering—females laying eggs in April."

A list of plants including: "Avocado—Duke, Fuerte, Hellen"*

*Plants failed to survive but indications are that scale would successfully overwinter.

"In the last group of plants above there appear several plants upon which I have found the olive scale only in small numbers and usually only when there is a good host plant very near. These plants are **Cinnamonum camphora**, **Escalonia rosea**, and grape. Perhaps avocado would also fall in this group. Of the entire list of plants in this report, Fraxinus velutina appears to be the best host for the olive scale.

"In general, it is difficult to decide which plants are **not** hosts for the olive scale. In cases where the scale completes only part of its development on a host plant it is conceivable that, with constant reinfestation, a strain of scale might develop which could carry out its whole life cycle on the plant in question."

On May 11, 1944, in reply to an inquiry, Dr. Stafford wrote me as follows: "The avocado trees sent to me by the California Avocado Society are growing in a lath house here in Kearney Park near Fresno. In the winter of 1942-43 the trees were frozen. The Hellen was especially hard hit while the Duke seemed most resistant to frost. In the summer of 1943 new growth from the Hellen trees were heavily infested by contact with a privet plant. The privet was removed at the end of the summer. This May (1944) an examination of the leaves showed that over 90% of the female scales that reached adult stage failed to overwinter. However, those that survived laid eggs which are now hatching. The plants will be observed after another winter.

"This May (1944) no Parlatoria olive scales were found on the Duke trees. On the Fuerte trees a few adult females overwintered and laid eggs which are now hatching.

"I was unable to establish the Parlatoria olive scale on the avocado fruits that were sent

to me."

Under date of May 5, 1945, I have the following further and apparently final report from Dr Stafford:

"I am now stationed at Davis, California. I have delayed answering your letter until I could come to Fresno and examine the avocados. As you may know, the avocados were transplanted and all subsequently died. Though I have no notes on these trees in the fall of 1944, I do remember making some observations. There were no **P.oleae** on the Dukes. There were only one or two on the Fuertes (although there were several oleander scales). On the Hellen there were many times less the number of live scales than had started to overwinter in the fall of 1943. I believe that Dean Palmer saw these trees in 1944.

"I understand from your letter that the olive parlatoria scale has been found on avocado trees in Los Angeles. From my observations in Fresno I thought that the avocado would not be a good host. However, I can easily believe that the olive parlatoria scale might adapt itself to avocado. I have observed good host plants at Kearney Park that did not become generally infested for about three years. In the meantime, olives and Italian jasmine were heavily infested throughout the park.

"Thank you for telling me of the Los Angeles infestation. I will be interested to follow your attempt to eradicate it."

I am writing Dean Palmer to learn whether he did see these trees in 1944 and what his observations were. I am also correcting Dr. Stafford's impression that olive parlatoria has been found on avocado trees near Los Angeles. Although there are some avocado trees near the infested deciduous fruit trees and ornamentals in the Belvedere Gardens infested area, we have found no scale on the avocados.

It definitely appears from the observations made at Fresno that the avocado is not a preferred host. It is, however, likewise evident that there is a possibility that the insect can at least maintain itself on the avocado. I had hoped that the observations might be conclusive one way or another. Although Dr, Stafford said nothing of discontinuation of the work by the University at Fresno, I understand from others that there is no immediate prospect of any further work there.

Under the circumstances it would not seem advisable to attempt further efforts along this line unless some favorable opportunity is found. In the meantime, we will continue the attempt at eradication of the infestations on city lot properties found in Belvedere Gardens.

Sincerely yours,

HAROLD J. RYAN
Agricultural Commissioner
Los Angeles County