FEDERAL PUBLICATION ON MEDITERRANEAN FRUIT FLY

The bureau of entomology of the department of agriculture, Washington, has issued a circular on the Mediterranean fruit fly, by A. L. Quaintance, in charge of deciduous fruit insect investigation. It contains a good deal about the introduction of the pest in Hawaii and the efforts to control it here, and in a statement of combating the pest speaks approvingly of the clean culture adopted here which met with some local criticism. In his introduction, the author says:

"The recent establishment in Hawaii of the Mediterranean fruit fly and the quarantine restrictions against Hawaiian fruit imposed by the State of California have aroused considerable interest in this very destructive insect, and there have been frequent requests for information concerning it. To meet this demand for information the present paper has been prepared and largely compiled from the writings of entomologists in countries where the insect exists, particularly the writings of Froggatt, French, and Fuller in Australia, and Lounsbury and Mally in Cape Colony, South Africa.

"There can be no question that the Mediterranean fruit fly is a most serious drawback to the successful cultivation of fruit in the countries where it is established. Indeed, the cultivation of fruits is scarcely possible in the worst infested regions. The fruit-growing industry of Bermuda was practically destroyed many years ago by the introduction of the insect into that island. Its introduction into the United States in all probability would be calamitous to the orchard interests of our more southern states and of California, in which region it would find conditions very similar to those in countries where it now exists in most destructive numbers.

"This species belongs to a group of insects—the family Trypetidae of the order Diptera, or flies—for which no very successful means of control have been found. Despite a large amount of experimentation in the control of this as well as other related species, including our own apple maggot or railroad worm (Rhagoletis pomonella Walsh), little has been developed that is of value in lessening their injury, except the collection and destruction of fallen infested fruit and the more recent use in South Africa of a poisoned bait sprayed over the trees for the destruction of the adult flies.

"In view of the very serious character of the pest and the great difficulty in its control, it is most urgent that all possible pains should be taken to prevent its introduction into this country. The energetic measures taken by the Hawaiian and California authorities are much to be commended."

Discovery in Hawaii.

Following is a statement regarding the discovery of the fly in these islands:

"This fruit fly was discovered in Hawaii about the middle of the year 1910, and the fact of its establishment in the island of Oahu was announced to the Board of Commissioners of Agriculture and Forestry by the entomologist, Mr. E. M. Ehrhorn, at its meeting on October 6 of that year. It was suggested by Mr. Ehrhorn, and the suggestion was promptly carried out, that notice be given to the California State Horticultural Commission of the establishment of the pest in the islands. General observations indicate that the insect had been present in the island some two or three years previous to its discovery. It was first reared from oranges taken in Honolulu. The Territorial Board of Agriculture and Forestry promulgated a regulation (rule 7), which was signed by the governor November 21, 1910, prohibiting the shipment of fruits subject to infestation to other islands of the territory."

The circular here relates the action of the California Horticultural Commission, upon being apprised of the Hawaiian visitation, in promulgating a quarantine order barring the importation of all fruits, vegetables, berries, seed pods, etc., either cultivated in the orchards or gardens or growing wild in the Hawaiian islands, with the exception that pineapples, bananas and all root crops the edible portions of which during growth have always been beneath the surface of the soil should be admitted at the ports of California, with the proviso that any of the exempted fruits or vegetables later found to be infested by the fly should be immediately included in the quarantine list. From this the circular proceeds to say:

"During the summer of 1911 Mr. E. K. Carnes visited Hawaii and spent some time in a thorough investigation of fruit fly conditions and gave a preliminary report of his investigation in the monthly bulletin of the State Commission of Horticulture of California for December, 1911, pages 5-13. The substance of this report later appeared in the Proceedings of the Fortieth Fruit Growers' Convention of the State of California, pages 71-78. In December, 1911, Commissioner A. J. Cook dispatched to the islands as a port inspector to assist in preventing embarkation of infested fruit Mr. H. A. Weinland, working in conjunction with Mr. Ehrhorn, superintendent of entomology, and Mr. W. M. Giffard, director of the fruit fly control. The plan of work adopted by the Hawaiian authorities has been in the main that of eradication. The difficulties of the situation are, however, enormous by reason of the irregular nature of the country and the large list of fruits upon which the insect may subsist. This situation is well pointed out by Carnes in his report in the Proceedings of the Fortieth Fruit Growers' Convention of the States of California, page 74, as follows:

"From the best authentic information available, it appears that the Mediterranean fruit fly has been on the Island of Oahu, upon which the city of Honolulu is located, for at least two years and probably longer. It is now firmly established in practically all sections of this island and it has also been taken on the adjacent island of Kauai, known as the Garden Island. I did not find it on the Island of Maui, but, owing to the limited time assigned to my investigation, to cover the entire territory was impossible; moreover, the realization came to me that our real problem was the Island of Oahu. * * *

"The fly has spread from the lower cultivated areas and is now infesting the wild guavas on the sides of the mountain, in the gulches, on the plains, and in the cultivated portions of the valleys. In addition to the wild guavas, which are almost continually in fruit, many other wild fruits that are hosts grow in abundance; also, large patches of the prickly-pear cactus are to be found all over the mountains. In other countries this fruit carries the flies over winter, and will undoubtedly prove a host fruit in the absence of other hosts.

"The worst infested portion of the Island of Oahu is the resident section of the city of Honolulu, and it is from this plague spot that California would be most likely to become infested. This is the section visited by all tourists stopping at Honolulu, and it is from this district that they procure the tropical fruit which finds its way to the port of San Francisco.

"The very dangerous character of the pest led Congress to make an emergency appropriation for an investigation of the insect in the United States, its territories and possessions, and this work will be promptly taken up by the Bureau of Entomology."

Further information is given from individual reports as follows:

"Writing of the fruit fly in Hawaii, Mr. E. K. Carnes, as a result of a visit to the islands under the auspices of the California State Commission of Horticulture, states:

"On Oahu the following fruits and vegetables have been attacked: All species of citrus fruit, peaches, figs, grapes, rose apple, star apple, mangoes, white lemon guavas, wild guavas, alligator pears (bruised and fallen), strawberry guavas, papaya, sapota, Carissa arduina (South African) also string beans and peppers.

"In addition to this list the known host fruits include: Eggplant, coffee, plums, cherries, persimmons, grenadillas, maupi fruit, apricots, pears nectarines, loquats, apples, shaddocks, mandarins, mammee-apples.

"So far the banana and pineapple appear to be immune from attack, but close inspection should be maintained for future development.

"To this list for Hawaii should be added the additional fruits more recently found to be infested, as stated by Mr. W. M. Giffard (Hawaiian Forester and Agriculturist, April, 1912), namely: Kumquat (Citrus japonica), Murraya exotica, and Eugenia sp. Mr. Giffard adds:

"I would further report that coffee berries, varieties of orange, loquats, varieties of Eugenia, and Kamani seeds appear to be among the worst-infested fruits so far examined.

"The above records indicate the omnivorous character of the pest and leave no doubt that when once introduced into a locality where proper temperature conditions exist it will be able to maintain itself without difficulty."

The circular tells of efforts being made in various countries to find natural enemies of the fruit fly, but its tone in this respect is not the most hopeful for success.

A bibliograph of the subject occupies six pages at the end of the pamphlet, in which appear the names of Craw, Carnes, Ehrhorn, Giffard and Weinland, all of whom have conducted entomological investigations in Hawaii, although the late Mr. Craw's contributions to fruit fly literature were before he left California to become Territorial entomologist for the board of agriculture.

SUNNY JIM BACK

(Continued from Page 1)

and other famous mines of that district are located.

"The United States Geological Survey has down on its portfolio that there is no doubt that this old channel went through the Ralston Divide, although old miners were skeptical about whether the blue gravel channel did. Now we have driven very nearly a mile of tunnel into the mountain, about 1000 feet from the summit, and last April we found the blue gravel. Since then we have been running drifts and have already found 155 feet depth of this gravel, but have not yet bottomed the channel. These blue gravel chanels have always been very, very rich and we are hoping and expecting to find just as rich deposits as were found lower down,—in fact, the deposits should be richer on the upper levels as being nearer the source of gold. This divide is situated between the American river and Long canyon, the beds of which are about 2500 feet below the summit.

Rich Deposits Found.

"This company also, at the upper end of its property, at a place known as the Goggins, took out some $13,000 last year by hydraulic mining. It was washed from the gravel bed at the upper end of our property fourteen miles from where the tunnel is located. We have a ditch that supplies the monitors for the hydraulic work eight and a half miles long, which carries 5000 miner's inches or equal to 75,000,000 gallons daily. This water can be increased tenfold by putting in a dam, for which we have a site a hundred feet high at the mouth of what is known as the French Meadows. If these gravel banks continue to be profitable we expect some day to increase the water and work other gravel beds.

"This company has owned this property now three years and has spent $280,000 odd dollars on it. There are five layers of gravel in that divide all containing gold.

Fortune for Mine.

"Old Ralston laid the foundation of his fortune in this gravel. He sold out for $375,000 to a French company, which ran a great many tunnels on the place to find the blue gravel channel, but never got into the right one. Finally the company got into financial straits and gave up.

"Then we got hold of it and we are the first people that have ever struck the blue gravel there, proving that the United States Geological Survey was right. We hope that in the end it will prove to be as rich in gold as it was in other places. If we do not get gold in this blue gravel it will be the first time in the history of California that the deposits have not been found in the blue gravel channels, which have always been the richest gravels in the state.

Big Land Scheme.

"Paul Isenberg and I, with others, are interested in a piece of land on the Sacramento river, containing 13,000 acres and known as the Tubbs & Tuttle Ranch. It is being subdivided and sold in lots of twenty acres up and is being taken right along. Stein & Kendrick, the selling agents, say they will have no trouble in disposing of the tract in a short time. Our land is next to the Fair Ranch and has twenty-three miles of river front. A great majority of the people coming into California are seeking land, and a great many large holdings are being subdivided the same way.

"The general conditions in California are good. Business is good. The people are looking forward to a great influx of visitors and settlers in the Panama-Pacific Fair year.

Political Sentiment.

Mr. McCandless was convinced that Wilson would carry California from what he heard up country—Republicans saying they were going to vote for the Democratic candidate to beat the Bull Moose. Of Wilson's election he said: "I don't think we are going to have any radical changes. The Democratic party will do something with the tariff, but the general opinion in California was that nothing would be done which would disturb business. The stock exchanges all over the country, including New York, show that there is no uneasiness over the result. I think the country as a whole is perfectly satisfied.

"Johnson did not carry his own precinct, nor his own county. Even his own father voted against him.

Promotion.

"Just before coming home I went to Tacoma to bring down my wife. I met people there who had heard Walter G. Smith lecture on Hawaii and was told that at both Tacoma and Seattle people had been turned away I was glad to hear that—it tickled me to death.

"I had an invitation from the Panama-Pacific Boosters of California to accompany them on their flying legion trip to British Columbia, but to my great disappointment I was unable to go. I should have liked to be with them as a representative of Hawaii. The Panama-Pacific people are looking forward to seeing Hawaii make a good exhibit, and they are very friendly to Hawaii in general.

"I am not drawing away from Hawaii. I have not sold any sugar stock."

MAGAZINE WITHOUT WORDS IS LAST MID-PACIFIC

Have you seen the new Mid-Pacific Magazine for December? It's a wonder, in its way, breaks away from all the old, rather frayed out ideas of magazine making. At first glance it strikes the eye, used to the old cover design, and at the second it cantpres design, and at the second it captures graphical perfection. This number of the Mid-Pacific contains nothing but pictures. Surprising that, and rather shocking to one accustomed to the reams and reams of Christmas stories printed in the usual style of the mainland magazine, but the pictures are all good, and lightly looked at they tell a fascinating story of the lands bordering upon the Pacific. The Editor, Alexander Hume Ford is to be congratulated upon his really unique offering he has given us for this year's Christmas.

AT THE HOTELS

YOUNG HOTEL ARRIVALS.

Nov. 9.—Dr. Beasley, Waialua; F. F. Baldwin and wife, Maui; C. E. Wright, Hilo; John Hind, Kohala; L. Macfarlane, Kona; B. W. Haserfield, Chicago; Sam Parker, Jr., Hawaii; Chas. S. Cerran, California; D. E. Metzger, Hilo; Mrs. B. H. Watkins, Lellehua; Mrs. W. R. Gibson, Lellehua; Mrs. A. S. Burton, San Francisco.

Nov. 10.—H. P. Faye, Kekaha; E. D. Lanz, Lihue; Mrs. G. E. Bruns, Local; W. B. Tynus, Local; Chas. Blake, Kolou; E. B. Bridgewater, Lihue; Alex. A. Forsyth, Ewa; J. P. Foster, Pala; J. E. Foster, Pala; Mrs. C. C. Campbell, Punnene; Mrs. C. L. Dowdle, Pala; Dr. G. H. Stover and wife, Denver.

Nov. 11.—H. Carls, Lihue; W. J. Conroy, San Francisco; S. McKearn, San Francisco; P. C. Jones, Local; M. M. Robinson, U. S. N.; E. T. Patterson, U. S. N.; A. M. Kashiwa, New York; W. J. Seymore, San Francisco; John L. Acheson, Portland.

Nov. 12.—Max Lewin, San Francisco; J. Galland, Spokane; M. M. Galland, Spokane; W. E. Buck, San Francisco; C. E. Tayman and wife, Schofield Barracks; N. F. McClure and wife, Schofield Barracks; Mrs. Watkins, Schofield Barracks; Capt. J. C. Bells, Schofield Barracks; P. Phillips, Mauna Kea; T. Cobb and wife, Shanghai; H. D. B. Moore, Shanghai; C. B. Olson, Kahuku; T. E. Brady, Kentucky; W. G. Ball, Schofield Barracks; Mr. Stertevant and wife, U. S. Army; W. D. Redman, U. S. N.; Mrs. T. Ross and daughter, U. S. Army; F. Minor, San Francisco; Col. and Mrs. Raymond, Local; Dr. H. Raymond, Local; Dr. W. M. [illegible] and wife, U. S. A.; F. H. [illegible], Schofield Barracks; Mrs. S. F. [illegible] Clure, Schofield Barracks; [illegible] Binder, Astoria, Ore.; Luther [illegible] and wife, Manila; J. C. Hilton; Frank L. Kuhn, San Francisco; T. H. Barnard, Calco, Cal.; [illegible] Edminster, Schofield Barracks; F. [illegible] Chamberlain, Manila; J. M. [illegible] U. S. N.; Mrs. Lewis Foerster, Schofield Barracks; James D. [illegible], Local; W. Morrison, Local; Walter L. Wheaton, Schofield Barracks; [illegible] Bradbury, Los Angeles; R. Osborne, Los Angeles; Wm. C. Brown, U. S. A.; Geo. P. Irwin, U. S. A.; W. Quinn, Hilo; Wm. Watron.

Nov. 13.—J. E. Gannon, Lahaina; W. W. Driscoll and daughter; R. L. Turner, Chicago; Ed. Palmer, Lihue; C. W. Spitz, Lihue; L. Hume, Schofield Barracks; Mrs. McM. Silver, Reno, Nev.; Geo. W. Armitage, San Francisco; F. Minor, Schofield Barracks; A. B. Leckenby, Kahuku; Miss Robinson, U. S. A.; Miss Patterson, U. S. A.; Wm. H. Edwiston, Schofield Barracks; F. McCommon.

Nov. 14.—Thomas B. Parr and wife, Laie; H. C. Dolliver, Hoela; W. Leslinger, Schofield Barracks; Capt. Ingall and wife, San Francisco; J. E. Dunn, Fort de Russy.

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