

O'GARA'S REPORT FOR FISCAL YEAR SHOWS MUCH WORK

Report of the Pathologist for Jackson county for the fiscal year beginning July 1, 1912 and ending June 30, 1913.

To the honorable county court of Jackson county:

In accordance with the usual custom, I am herewith tendering the annual report of the work done by the pathologist's office during the fiscal year beginning July 1, 1912 and ending June 30, 1913:

The duties of the pathologist come under the following heads: 1. Inspection. 2. Office and library work. 3. Laboratory investigations. 4. Field investigation. 5. Weather service. 6. Publication of bulletins and papers.

Inspection

The work of inspection includes supervision of orchard inspection together with that of nursery stock, seeds and plants, both imported and exported. Orchard inspection consumes an enormous amount of time, so much so that if every tree now growing in the Rogue river valley orchards were given half a minute of time, the four inspectors working ten hours a day, and allowing no time for travel, could not make the rounds in less than two years time working every day of the year. Fortunately, we are assisted in a very great degree by the large number of deputies, and by many of the large orchard owners whose interests in their own welfare and that of the valley are such that they can be depended upon for help.

Careful attention is given to the inspection of nursery stock, seeds and plants. Owing to the fact that we have found potatoes shipped in from California points infested with the dangerous Tuber Moth larvae, all potatoes for consumption or planting are now held for inspection. We have also received co-operation from the California authorities in this matter. Alfalfa and grass seeds have been inspected and tested for purity.

Office and Library

Office and library work is very heavy due to the large correspondence and the receipt of numerous bulletins and other publications which must be properly catalogued and indexed so as to be available for reference. The library receives every publication of the U. S. Department of Agriculture, together with the publications of the State Agricultural Experiment stations. Publications are also received from many foreign countries. An exchange list is maintained, and all publications issued by the pathologist's office are sent to the various offices and individuals on this list. In this way all parts of the world may know what we are doing in a horticultural way in the Rogue river valley.

Laboratory

Laboratory work includes the examination of large numbers of specimens of fungi, insects, etc., sent in for examination. In many cases, determination can be made only after the cultivation of the organism, which entails careful work. Breeding cages for various insects, such as for codling moth investigations, cherry fruit saw-fly, peach bud moth and peach crown borer, are always in use.

The chemical examination of fungicides and insecticides necessitates much careful work. We are constantly testing new compounds and brands in the laboratory and in the field in the attempt to increase the efficiency of spraying methods. During the past year such materials as dry arsenate of lead and zinc arsenite have been tested by field experiments. All of this work has for its aim not only the matter of increasing efficiency in spraying, but in lowering the cost.

Soil testing in co-operation with the U. S. Bureau of Soils has also been a part of the work. This constitutes largely the matter of determining the presence of deleterious substances. Soil fertility investigations have also been carried out by field investigations.

Investigations

During the last year, continued work has been done in the matter of fertilizers and cover crops. It has been shown that cover crops may be readily grown in the Rogue river valley. In the growing of cover crops in the orchards, nitrogen and humus is added to the soil at the lowest possible cost. The physical character of the soil is also changed, making it easier to cultivate. It has been shown that farmers should not spend too much money in the purchase of commercial fertilizer. By the growing of cover crops, nitrogen is added, and, at the same time, unavailable plant foods are made available due to the presence of humus and the increase of the bacterial flora. In the growing of alfalfa it has been

found that the addition of phosphate fertilizer in the form of superphosphates has increased the yield from 50 to 100 per cent.

The wilt disease of potato and tomato plants has also been under investigation, and co-operative work will be continued with the U. S. Bureau of Plant Industry.

The discovery of the presence of the Cherry Fruit Saw-fly in the valley necessitated work along the line of its control. This office was the first to publish the fact that this insect not only attacks cherries but plums and prunes, the latter very seriously. The insect has been controlled by spraying with arsenate of lead.

Important work has been done on a disease of the apple known as "Water Core." The cause of this trouble has been determined and methods of taking care of the orchards and the fruit so as to reduce the amount of injury have been devised. Bulletins have been published for the purpose of acquainting growers with the trouble. The two bulletins published by this office are the first published in the United States on this subject.

Work has been done in investigating the rusty leaf mite of the pear which had, heretofore, been injurious to apples only in the eastern United States. About three years ago, this mite was introduced into the Rogue river valley, and instead of attacking apples seriously, it at once became injurious to pears. It is easily controlled by spraying. The erinose mite of the grape has also been found and is controlled by lime-sulphur spray.

A fungous organism heretofore unreported in the United States was found on the wild chokecherry. This fungus is being investigated as it may be of economic importance to the stone fruit industry.

The Local Weather Bureau

The key station at Medford is now fully equipped, an anemometer and triple register having been installed during the year. With this instrument, wind directions and velocities are automatically recorded. For the first time we are getting accurate data on winds which play an important part in the climate of the valley. In addition, the office is equipped with a mercuric barometer, barograph, maximum and minimum thermometers, thermograph, psychrometer and rain gauge. Besides the key station at Medford, there are ten other co-operative stations in the county. Stations at Jacksonville, Ashland, Siskiyou and Prospect were established a number of years ago. The new stations are the Gardener ranch, and Lone Oak ranch, Talent; Hillcrest and Hollywood, Medford; Woodlawn, Central Point; and the Oaks Orchard, Table Rock. The co-operative observers at each of these stations take maximum, minimum, temperature readings, instruments. The Hollywood and Hillcrest stations are equipped with barographs, in addition to the regular equipment.

The seven new stations, with Medford as the key station, were established entirely through efforts made by the pathologist's office. A need was felt for more accurate data in studying conditions relating to spring frosts. The proper representations were made to the district forecaster who recommended to the chief of the weather bureau the establishing of the seven stations. The co-operative observers report directly to the key station at Medford, also sending in to the district office at Portland the monthly summary. The greatest value of the large number of co-operative stations lies in the securing of data which make it possible to forecast frosts more accurately than heretofore. During the past season every district received daily telephone advice as to the probable weather conditions which might occur during the next 24 hours. All frosts were accurately forecasted, not only as to their degree, but the hour at which firing would be necessary.

That this district enjoys the distinction of being the foremost in making a study of exact conditions, devising methods of economic orchard heating, etc., is evinced by the fact that the pathologist in charge has prepared for the New American Encyclopedia of Horticulture, edited by Dr. Bailey of Cornell College, the chapters on frost forecasting and frost prevention.

Publications

The publication of bulletins, circulars and papers has been an important part of the work connected with the office. Wherever information of a nature directly beneficial to the public is needed, timely publications have been prepared. Much information in the matter of spraying, or an available form. The farmer or fruit grower cannot take the time to memorize the various formulae time of application, etc., therefore he is furnished with up-to-date information in a form readily understood.

The various publications issued during the fiscal year are:

Bulletins

Cover Crops for Orchards in the Rogue River Valley. (Bulletin No. 8.)

Water Core of Apple. (Bulletin No. 9.)

Spraying Calendar for 1913. (Bulletin No. 10.)

Studies on the Water Core of Apple. (Bulletin No. 11.)

Press Bulletins

The Grasshopper and How to Control It. (Press Bulletin No. 3.)

The Potato Tuber Moth. (Press Bulletin No. 4.)

Circulars

Cider Vinegar and Its Making. (Circular No. 1.)

Gardener's Calendar and Planting Table. (Circular No. 2.)

Papers

Urophylletis alfalfae, a Fungus Disease of Alfalfa Occurring in Oregon.

Economic Importance of the Mite Phyllopterus schlechtendalii, Nalepa. (Rusty Leaf Mite of the Pear.)

The Cherry Fruit Saw-Fly and How to Control It.

Organization and Methods of Control of Plant Diseases, With Special Reference to Pear Blight.

Frost Forecasting and Orchard Heating, Methods Used in the Rogue River Valley.

Besides the above papers, a large number of others of more or less importance have been published both in the local press and elsewhere. An immense amount of data is at hand and is being worked up preparatory to the publication of a number of very important papers.

Office Expenses

The expenses of the office have been borne largely by the pathologist in charge, the same being paid out of his personal funds. The expenses borne by the county have been office rental, part of the postage, express, telephone and telegraph, and an occasional small sum for livery hire. The printing bills have been paid in part by the county. The sum of \$100 per month was allotted for office expenses, but this was by no means sufficient to carry the office expenses.

During the course of the year it was found necessary to purchase a new microscope with accessories, chemicals, laboratory and office furniture, books, together with an outlay for printing and binding. In addition to the above it was found necessary to meet the expenses for extra postage, telephone, telegraph and express. Railroad fare and livery hire for official work were practically all met by the pathologist. Furthermore, insurance of the contents of the office, library and laboratory, and heavy discounts of county warrants received as salary added to the expense of maintaining the office.

The actual amount paid out of the pathologist's salary for maintaining the office was \$1648.50.

Respectfully submitted,
P. J. O'GARA,
Pathologist for Jackson county.

EASTERN TRAINMEN TO STRIKE FOR INCREASE

NEW YORK, July 8.—Announcement was made here today that 94 per cent of the conductors and trainmen on eastern railroads have voted to strike unless their demands are acceded to. A general increase in wages is asked.

Mrs. Pinke will tour the Canadian northwest this fall.

SUFFERED AWFUL PAINS

For Sixteen Years, Restored
To Health by Lydia E. Pinkham's Vegetable
Compound.

Moretown, Vermont.—"I was troubled with pains and irregularities for sixteen years, and was thin, weak and nervous. When I would lie down it would seem as if I was going right down out of sight into some dark hole, and the window curtains had faces that would peep out at me, and when I was out of doors it would seem as if something was going to happen. My blood was poor, my circulation was so bad I would be like a dead person at times. I had female weakness badly, my abdomen was sore and I had awful pains."

"I took Lydia E. Pinkham's Vegetable Compound and used the Sanative Wash and they certainly did wonders for me. My troubles disappeared and I am able to work hard every day."—Mrs. W. F. SAWYER, River View Farm, Moretown, Vermont.

Another Case.
Gifford, Iowa.—"I was troubled with female weakness, also with displacement. I had very severe and steady headache, also pain in back and was very thin and tired all the time. I commenced taking Lydia E. Pinkham's Vegetable Compound and I am cured of those troubles. I cannot praise your medicine too highly."—Mrs. INA MILLER, Gifford, Iowa.

'MOTH AND CANDLE' NEW GAME OF HOTEL ROBBERS

BERLIN, July 8.—The German provincial police are endeavoring to round up a gang of hotel thieves working an entirely new trick variously known as "The Magnet" or "The Moth and the Candle." Hotels are selected in the provincial towns which have no electric lights and few even among the best, have that. Usually a rich farmer or traveler is picked out as the victim. A beautiful young woman, called the "magnet" rents an adjoining room. Late at night the victim is awakened by a light knock on the door and a shy but sweet voice stammers out that

its owner is in difficulty. Her candle or gas light has been extinguished. She has no matches.

The victim can't resist that voice. He opens the door of his room and sees in the dim hall, a picture in bewitching negligee, downcast eyes and blushing cheeks. The victim, whether young or old, feels that gallantry demands he should aid beauty in distress. No, he demurs at giving her matches. He insists upon going to her room and lighting her candle or gas himself. The lady stands at the door of her room; rarely will she enter while the chivalrous farmer is there. She is very modest. The victim is in no hurry to leave.

When he awakens in his own room next morning he finds he has been robbed of money and jewelry. Confederates of the "magnet" slipped into the room while the "magnet" was having her candle or gas lighted.

Edward Sheldon's play "Romance" will reopen in New York early in the fall.

MISS PANKHURST PAYS \$10 FINE TO ESCAPE PRISON

LONDON, July 8.—Screams of defiance were hurled at London authorities in Bow Street court here today when Sylvia Pankhurst, daughter of Mrs. Emmeline Pankhurst, and Zelle Emerson, the American suffragette were given prison terms. When Miss Pankhurst was arrested last night for speaking on the street she fiercely resisted the police.

The court demanded that Miss Pankhurst give bond for good behavior. She flatly refused. A three months' sentence was then imposed. "I won't stay in jail," she screamed.

"and you cannot keep me there. I will start a hunger strike."

Miss Emerson was sentenced to one month's imprisonment at hard labor. She was convicted of resisting an officer.

Later the magistrate recalled Miss Emerson and gave her the option of paying a \$10 fine or going to jail. She paid the fine.

PROTEST TREATMENT OF AMERICANS AT GUAYMAS

LOS ANGELES, Cal., July 8.—Protests of treatment accorded Americans in Sonora have been sent the state department today by C. D. Taylor, United States consular agent at Guaymas. Taylor asserts that M. Morrison of Potsdam, N. Y., was held prisoner for three months, and then compelled to walk fifty miles when the Mexican federales evacuated the town of Torin. A. P. Browning of Arizona, a Guaymas commission agent, also was subjected to hardships, Taylor alleges.

HORSES HORSES HORSES MARES MARES MARES JUST ARRIVED or Trade

20 head of horses and mares all right out of hard work. Have finished contract and must be disposed of. \$225, a well matched pair of chunky mares eight and nine years old, weight 2700, with nice flowing manes and tails, they are good fast walkers and true workers, kind and gentle in or out of stable. This price includes their heavy butt chain breeches harness all for \$225 with two weeks trial allowed.

\$75, a chunky brown mare 8 years old, weight 1300, will work single or double, two weeks trial allowed.

\$150, a pair chunky mares about nine years old, weight 2400 and their brass mounted harness and collars with two weeks trial allowed. Would go out and make any man a good living.

\$210, a chunky team six and seven years old, weight 2200, well matched in size and color and are well broke single or double or under the saddle. This price includes their harness and collars and 2 3/4 inch wagon, all in fine shape, will sell separate and allow two weeks trial.

\$90, a chunky black horse, age ten years, weight 1450, two weeks trial allowed.

\$75, a handsome bay mare six years old, weight 1150 and with nice flowing mane and tail, broke double only, two weeks trial allowed.

\$50, a chunky black mare, eight years old, weight 1150, good worker, two weeks trial allowed or will trade.

\$15, a good stock saddle and bridle.

\$65, a good side spring mountain wagon.

\$25, a sorrell mare about ten years old, weight 1100, two weeks trial allowed.

\$40 or best cash offer, a Jersey cow.

\$25, a heavy butt chain bucher harness and collars.

Missouri Mamalt Jack five years old and a sure foal getter, will sell cheap or trade for horses or auto.

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Res. Pac. 5031; Home 227L.

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