

GOLD RAY FISH WAY IS IN GOOD WORKING ORDER

No Large Runs of Salmon or Steel-heads Have Been Seen at Gold Ray This Year, Although Runs Have Been Reported at the Pass.

H. C. McAllister, master fish warden, will be in Medford Monday for the purpose of investigating fishing conditions and inspecting Rogue river fishways and dams.

Considerable complaint has been made regarding the fishways at the dams. Stories have been brought in that hundreds of fish were congested below the dams and that they found it impossible to locate the ladders and were bounding themselves to pieces leaping against the structures.

A close inspection of conditions at Gold Ray shows that the fishway is in good working order, and that fish can readily ascend the ladder. The great flow of water over the dam, however, renders it hard for the fish to locate the ladder. Once located, they have no difficulty in going through.

Logs Were Used.

Last year logs were placed along the crest of the dam, shutting off the water from the two sides and making it comparatively easy for the fish to locate the ladder. The floods of the winter, however, took these logs off the west side of the dam, as well as a portion of the dam itself. As a result, a large quantity of water, with the river unusually high, is pouring over the western side of the dam. As soon as the water subsides sufficiently for repair work, the dam will be repaired and the logs again spiked along the crest, remedying present conditions. At present, however, the depth of water makes it impossible to make the repairs.

Fish are Seen.

Fish can be seen daily leaping into the cascades and trying to ascend at the west end of the dam. These fish, however, will work around to the only available outlet—the ladder—and make up the river in course of a short time.

There have been no large runs of salmon or steelhead at Gold Ray so far this year, though a run was reported at Grants Pass a fortnight ago. The probabilities are that the fish cannot get above the seines of the Grants Pass fishermen, or if they do escape them, have difficulty in getting above the Ament dam, which was badly damaged by the floods of last winter, which practically rendered useless the new fishway, though the old one is still in working order. Most of the fish congregated at the base of Gold Ray dam prove upon investigation to be carp—some of which have attained enormous size. There are, of course, some salmon and some steelhead, but nothing like as many as there are carp and suckers.

Deputy Fish Warden Edward Clanton caught two fishermen at the base of the Ament dam last Saturday night and arrested them. They were fined \$100 each.

Reports from the mouth of the Rogue state that there are no salmon there, though the freshet, it is presumed, will bring them up.

PROMISE GOOD GAME FOR NEXT SUNDAY

It is reported that Central Point has strengthened its team materially and is prepared to give the leaders of the league a run for their money next Sunday.

This will be the first game that Medford has had with Central Point since the season opened. In the practice game before the season opened the Central Pointers held the local team closer than has any team since, and it is not beyond the possibilities for them to chip that 1,000 percentage.

Lux is a good pitcher, and with reasonable support should keep this hard-hitting Medford bunch guessing.

Gold Hill and Ashland teams will play at Ashland Sunday. The two teams met on the Gold Hill grounds last Sunday and the boys from the Granite City won.

And still the Portland team progresses toward the cellar. It is characteristic of the McCredie bunch that when they start one way or the other they hardly ever stop until they have reached the limit.

Manager Hall will put up his strongest lineup in Sunday's game. He wants to win it and the Central Point team is beginning to look dangerous.

Haskins for Health.

PEAR BLIGHT AND ITS CONTROL UPON THE PACIFIC COAST

This is the Fifth of a Series of Articles That Will Be Printed Daily Until Subject Is Completed—Every Orchardist in the West Should Save These Issues for Future Reference, as They Contain Valuable Information.

By PROFESSOR O'GARA,
Assistant Pathologist United States Department of Agriculture. Written especially for the Medford Mail Tribune. Copyright, 1910, by the Medford Mail Tribune.

(Continued from Wednesday May 10.)

Proof That Insects Carry Blight.

That insects really carry pear blight germs on their feet and mouth parts, I have proved by capturing these insects in infested orchards and allowing them to walk about on prepared culture plates known as petri dishes, which contained a substance in which germs might make growth. In from 24 to 48 hours colonies of germs would be found growing from the points where the insects walked upon the culture medium. By inoculating growing shoots from these cultures, typical cases of blight were produced.

In the numerous experiments which have been made atomizing the germs on the tissues, it has resulted in a failure in most cases, except where puncture through the cuticle has been made by a pin point, or where by the breaking of the leaf or some slight abrasion the skin has been ruptured, allowing the germ to enter.

There are, therefore, two main methods of entry by the germ. First, in the nectar of the blossom, and, second, the tender tips of growing twigs or water sprouts. Blight occasionally enters by the third method—directly into the tender, growing, fleshy bark, through growth cracks, although as a general rule this method of entry is comparatively rare. Sap suckers or woodpeckers become infected by puncturing cases of holdover blight and afterward visiting healthy trees produce blight infection in them. We have several observations along this line, and doubtless many more occur in nature. It is even possible for the whiffletrees or implements used in cultivation to transfer the infection; pruning tools are certainly a very frequent cause of transmitting the disease.

Mr. Waite states that in Maryland he saw a nursery block of 10,000 Bartlett pear trees completely destroyed by blight. This block, as was determined by the specimens, carried actual samples of holdover blight in the stocks. When stocks were cut off above the dormant buds in the spring, the pruning tools became infected and the disease was transmitted to nearly every tree reached by the pruner. Instead of the buds pushing up, the cut surface began to gum and blight. The writer has seen in certain nurseries in Nebraska many cases where nursery infection has been brought about through the use of tools which have been used in cutting out blight infection in large orchard trees, without previously disinfecting them. Pear blight behaves in all sorts of irregular ways when it runs down the limbs and branches. Occasionally a fruit spur blighting causes the disease to spread in a circular spot an inch or two in diameter on the branches. More often it is an elliptical spot extending lengthwise of the branch. It may run down in a long line from the lower edge, making it very difficult to save the branch or even the tree by cutting on account of this narrow strip of the disease. It is almost impossible to anticipate the variations in behavior of the disease, because it depends upon so many different factors. It may be well to point out some of the factors controlling the habits of the disease in order that you may see how varied are the influences controlling it.

Factors Which Determine the Spread of the Disease.
These factors may be divided more or less completely into two sets. First, those which govern infection, and second, those which determine the spread of the blight in the tree after infection.

Factors Governing Infection.

The first factor is the presence of the bacillus. The pear blight germ must be present in the orchard or must be carried there during the season in order to have the blight. No matter how favorable the conditions may be, unless the germ is there the disease cannot develop. The immunity of the California and Oregon orchards up to recent years, of course, is attributed to the fact that the germ was not there. The second factor is the number of insect visitors. We have pointed out that insects carry the blight about. The honey bee is one of the most active in carrying the blight on the blossoms. Other insects visit the pear and apple blossoms and carry the blight very widely. The presence of some certain species of insects, as

already suggested, has been the means of introducing the blight into the twigs and branches or bodies of the trees. Not only must the insect be present and the germs there for them to carry, but the weather conditions must be favorable for the activity of the insects and to bring the trees into proper condition for infection.

Flower-visiting insects usually like sunny weather, especially sunny weather following a moist season, which allows many kinds to hatch out or develop from the pupa. Young orchards are not usually attacked by the blight, rather rarely in fact, until they have blossomed, unless there is a bad attack of blight in a pear or other pome fruit orchard near at hand. There are some cases of young orchards which I have seen in California and Oregon that have blighted somewhat seriously before they had bloomed, but they were alongside badly blighted pear orchards. The presence of water sprouts or spurs from the French stock, on which pear trees are mostly budded, often determines infection. In many localities the entire loss of the pear orchards has come through the infection of water sprouts and spurs coming from the crown or roots of the trees. Perhaps 90 per cent of the loss in many of the river orchards in the Sacramento valley has come about through this sort of infection. Right alongside of orchards which have been seriously damaged through the infection of water sprouts from the stock or roots we find thrifty trees which were budded on Le Conte, Winter Nelis and Kieffer roots; these have not gone down with the disease through their ability to resist the blight. It has been particularly noticeable that Winter Nelis roots are very resistant to the blight. Cases have come under my observation where the bodies have blighted as far as the union with the Winter Nelis stock and then stopped. If this experience proves universal, it is a strong argument in favor of using the Kieffer and Winter Nelis stocks on which to graft the more tender varieties. Furthermore, these stocks have a less tendency to throw out sprouts.

Factors Governing the Spread of Infection.

Several conditions or factors control the spread of the blight after it once enters the tree. Some of these are more or less connected with the conditions favoring infection. The vigor of the tree has a great deal to do with the amount of damage produced after the blight once enters it. Another fact which must be borne in mind is the variety of tree, whether apple or pear, or any other pome fruit. All varieties are not equally susceptible under similar conditions, there being in many varieties a certain tendency to immunity. The more vigorous and thrifty the tree, as a general rule, the more seriously it is attacked by the blight. The vigor itself is the effect of various conditions, such as the fertility of the soil, the amount of manure or of fertilizer used, or kind of cultivation, of soil, moisture, rainfall or irrigation, and the presence of other diseases, such as leaf blight, crown gall, root

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not, etc.

As a rule, trees on rich soil blight more readily than trees which are on poor soil. There are some apparent exceptions to this, and there is a difference in the behavior of blight on different soils in connection with their fertility. Alkali soils seem to favor the blight more than correspondingly fertile, or even more fertile soils that are not alkali. On the other hand, trees may blight on the acid soils of the eastern states. Stable manure causes the trees to be more susceptible to the blight than those not manured. The age of the tree also exerts an important influence. The older and slower growing the tree is the less it is attacked by blight, other things, of course, being equal. Exhaustive crops of fruit tend to consume the food material of the tree and help to check the blight to a certain extent. On the other hand, when the trees fail to fruit from unfavorable conditions, such as prolonged rains at the blossoming period, there may not be the opportunity for infection and the contradiction to this principle may be observed. From observation, orchardists know that during rainy and cloudy weather insect visitors, such as bees, are very rarely found working in the blossom. Since the bees are the principle distributors of the blight germs, it can be readily seen that if the entire blossoming period is covered by rainy or cool weather there is little chance for very serious and general infection, although there may be considerable holdover blight in the immediate vicinity of the blossoming orchards.

(To Be Continued.)

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People of refinement; people with means; retired business men; professional men; college and university graduates, are coming to the Rogue River Valley by the score. Within the past two years almost a hundred Chicago and Evanston, Illinois, people have purchased homes near Medford, and nearly every one of them has a friend or two whom they hope to induce to come and locate in the valley.

New York, Philadelphia, Boston and many other eastern cities are almost if not quite as well represented, while St. Paul and Minneapolis have more representatives here than any other several cities combined.

Think these statements over and get your thinker going. Write to the undersigned or the Medford Commercial Club for detailed information about the country, and you will never have cause to regret it.

Bearing Orchards Near Medford

Most of the producing orchards have been held in large holdings until recently. A few weeks ago the Eden Valley Orchard, containing 605 acres, was placed on the market in any desired acreage. We have been authorized to offer the bearing apples and pears for sale, and if you know anything about this country and want a desirable block of bearing trees, write or come soon. During the past week over \$150,000 worth of the property has been disposed of. It is located within two miles of Medford at an elevation of about 100 feet above the city and is one of the best kept orchards in the world. Parts of the orchard offered for sale have paid the owner over \$600 per acre per year for four years straight.

Do not come unless you are prepared to stay, for just so sure as you do come the combination of fat soil, grandeur of scenic beauty and Italian climate will steal you, body and soul. After one visit here you will be miserable any other place on earth.

John D. Olwell

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