

Thursday, March 5, 1874.

## The Apple Worm.

VALUABLE HINTS FOR ITS DESTRUCTION.

PROVO CITY, Feb. 24, 1874.

I have noticed in the DESSERT NEWS the past winter several treatises written upon the "Coddling Moth or Apple Worm," a destructive upon the apples and pears of Provo and Salt Lake City, and many other places, and fall, but no very practical remedies recommended for their destruction or methods to be adopted to curtail their numbers.

Destroy the moth and the apples are safe. I have caged the moth and larva, put them through their various changes from the egg to the full grown miller. By this process I find that the matured drops are produced from June to October, and when from the moth begins to die off and the chrysalis that remains, on account of cold and wet at this season of the year, begins to hunt winter quarters, any place that will shelter and secure them to weave the last cocoon for the season, where they remain until the next spring, when they commence to change into moth again.

Utah is one of the most fertile countries in the world for the increase and spread of moth of all kinds. A warm dry climate just suits the breeding of these moths, at least seventy-five per cent greater than in cold wet countries, where the rain descends in heavy torrents through the moth season, washing the eggs from the trees and destroying the moth and chrysalis to a very great extent. The millers cannot work while they are cold and wet, they will harbor in the grass, under clots of earth, under the bark of trees and any other place of shelter, where they can be found in great numbers until the atmosphere warms them again. This may last in wet countries for many days, and many may be destroyed by a diligent search at these times. The natural spread of this moth from the north to the south is about 500 or 600 yards during the summer.

In the Spring of 1870, in June, they were first discovered in the orchard of Mr. Lewis Meacham, near the Provo Woolen Mills in this city, supposed to have been brought there from the east in old bee hives, that were shipped the winter previous by W. D. Roberts, and placed in this orchard for cultivation by Mr. Meacham. This is very reasonable, as the moth and larva were found in the backs of old boxes and live all winter, yet a large majority of them perish with the cold. Examine the fences, pig pens, hen houses and all such places at this date, and many can be found in a dormant state.

How to get rid of these pests of the orchard is the all-important question to be considered. If they feed on apples and pears as their only food and cannot propagate without some writers assert, and they are not extended further than the orchards, they will be greatly curtailed. How this I cannot say. I think the bee moth, the wool moth and many other kinds of moths lived and prospered in Utah before bees or wool were imported to this country, but be this as it may it is not my object at present. I believe man holds the controlling power over every beast of the field and everything that liveth upon all the face of the earth, and when he gains the necessary experience all things are subject to his command by the help of the Lord.

In the first place every person having bearing apple trees must not in adopting the following rules: When gardening time comes examine the fences thoroughly, every piece of bark and split boards, and under the bottom rails of picket fences and every other place where the moth or larva have sheltered for the past winter, do this in every orchard and be sure they are all destroyed, then rake and burn all the trash that can be found upon the ground, sow a little wheat around the fences and over all the lot, turn out the chickens and let them work the ground over a number of times and destroy all the vermin that remains in the rubbish. The trees of every orchard now be examined and take off all the loose bark, this is very essential. Old buildings, cellars, out-houses, pens, animals, bee hives, straw and hay stacks and all trash and combustibles of every description must be thoroughly renovated. Ploughing or digging up the ground will not destroy many. A thorough cultivation of the orchard, keeping down weeds and cleaning out trash, watering much and stirring up the ground often are very necessary as a remedy. Grass and clover are great places of shelter for moths from the light and heat of the sun. When we think we have destroyed the last one of these pests, the month of June will still show another crop of war against this. This is the season of the great battle between the moth and the farmer, now is the time to bring every available force into action, the apples are again destroyed with a large increase of the moths.

The apple moth ascends from its harbor into the trees at sunset and continues to deposit its eggs on the leaves, stems, apples or any part of the tree it may come in contact with, but most generally at the top until the night air and dampness gathers too heavy for it to work longer, then it returns to find a harbor against the sun and light of day; it seeks the darkest place it can find. The apple moths are like all moths, they do their work in the dark because their eyes are evil. The apple moth is a small, grayish, light buff moth, wings reaching a little at the ends; it resembles many other moth in size and color, also the larva is very much like the breeds of other moth; but it is no more nor less than the old eastern apple worm, brought to this country by the same means that it first emigrated from Europe to the United States, in some old box, kegs, or some like means of conveyance, and it will continue to spread to the settlements in Utah that cultivate the apple or pear. Many are waiting to see the moths die off, this is a mistake, see entirely—there is no way to cure but what some will be for seed. Many remedies if persevered in may be applied, which will lessen the numbers of the moths so that good crops of apples may be produced for winter use.

Let every one be prepared with a good stiff pole with a fork at the end, examine well the apples at the blossom end and if they look black and worm-eaten take the pole and fork them off and bury them under the ground, this will destroy thousands of the insects. At this crisis the worm gets a few barrels or boxes with straw or hay in them, so that the wind cannot blow them over, then place a standard in the center on the side, half the length of the barrel, on the top, on which place an old lamp or a light made from grease in an old plate, line the barrel with hay. This will attract all kinds of insects that fly at night; four of these barrels or boxes to half an acre of trees will be sufficient. Persevere with this method a few days and you will begin to

see the good effect at the bottom of the barrels, the goldfinch butterflies, the large bat moth, flies of various kinds, and every insect that is attracted by a light in the dark will be found with their wings and antennae off from the effect of the tar. This is one of the best remedies that I can recommend. If a continued effort is persevered in I think it will destroy over half the apple moth, at the same time small fire built in different parts of the orchard; pine gum knots are very good, also pine wood dipped in kerosene, put a piece of light board on the top, on which place a piece of candle or a rag dipped in grease, light up early in the evening and in the morning you may count your hundreds of insects drowned in the water. Take an old cloth sufficiently large to reach around the trees, tie the top tight to the tree forming at the bottom of the cloth a shape like a large funnel or a lamp shade. Let the funnel extend within two feet of the ground, place a small hoop in the bottom end to hold it out, then smear the funnel all around with tar in the inside, the moths will use this as a harbor, and destroy themselves with the tar. If any one knows how to make sulphur candles, these may be used with great success by running them under the trees at early candle light, saturate rags in melted brimstone fastened in sticks split at the end, three or four feet long, at grey light in the evening light your torch, run under the tree for a few seconds until you get over the orchard; do this three or four nights in succession, and the moths will leave the trees until it rains or the night chills wash the smell of the sulphur from the leaves and branches of the trees. Suction pumps are very good to drench the trees at night, draw water from the well, pump it into a hose, and spray the trees, they will not disturb the tree again that night, this must be done early in the evening, as the moth finishes its work by nine or ten o'clock at night.

Gather all the old rags, woolen best, the them around the trunks of every kind of tree in the orchard, and the night chills wash the smell of the sulphur from the leaves and branches of the trees. Suction pumps are very good to drench the trees at night, draw water from the well, pump it into a hose, and spray the trees, they will not disturb the tree again that night, this must be done early in the evening, as the moth finishes its work by nine or ten o'clock at night.

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Respectfully, Yours, &c.,  
—Provo Times.

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Name of Station.	No. 1. Passenger.	No. 2. Freight.	Time.
Salt Lake	8:00 AM	3:40 PM	
Wood Creek	8:20	4:00	.75
Centerville	8:30	4:10	.75 1.00
Farmington	8:50	4:30	1.00 1.30
Kaysville	9:05	4:45	1.25 1.55
Arrive at Ogden	9:50	5:40	2.00 3.00

Name of Station.	No. 2. Passenger.	No. 1. Freight.	Time.
Arrive at Salt Lake	8:40 AM	6:20 PM	
Wood Creek	9:00	6:40	.75
Centerville	9:10	6:50	.75 1.00
Farmington	9:30	7:10	1.00 1.30
Kaysville	9:45	7:25	1.25 1.55
Arrive at Ogden	10:40	8:20	2.00 3.00

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