

thropy is working for its mitigation, and true statesmanship is making effort for its entire suppression, through the providing of industrial opportunity. New resources are all the time being developed, and Utah, while possessing many single things that imply wealth, sees in the aggregate a volume of prosperity which time will assuredly open so that "he who runs may read!"

Christmas just past was a grand if peaceful one. Everybody's wants were in the main supplied; and this brief review but anticipates, while wishing for all—

A HAPPY NEW YEAR!

THE BEE INDUSTRY.

The bee industry, like the fruit industry, does not receive the care and attention that it deserves. In order to raise good fruit in paying quantities we must fertilize, cultivate and trim our trees, vines, etc. We must be alert and vigorously attack and destroy its numerous enemies. In like manner, if we would be successful in beekeeping, we must take care of and protect the bees. It is not such a great amount of work that is necessary, but it is the little needed attention at the proper time. In other words, in order to make beekeeping a success, the most necessary object is good management.

One of the main things to do to accomplish this is to so manipulate the bees so as to always keep every swarm strong. If this is accomplished, in most instances the beekeeper will find his bees a paying investment by being rewarded with a good crop of honey and wax. Again, when the bees are strong they will get through the winter much better, and they will not suffer with spring swarms nearly as much as weak swarms. Also, if they are strong, they will always protect themselves against their enemies more successfully and when there is any honey flow at all they will gather it.

As the beekeeper has to meet and combat the enemies of the bees, it will perhaps be as well to name some of them, and also some of the methods employed to keep them down or destroy them. First of all, and we believe one of the most universal pests the bees and beekeepers have to contend with is the bee moth. Yet if the bees are strong and if there is bee space under and around the frames inside the hive, the bees as a rule will keep them down. But they are liable to cause serious trouble if the frames rest on the bottom of the hive or if they fit tight to the alues. Mice also will cause serious trouble if they get into the hive in winter. The only remedy is to keep them out of the hive; for this purpose tin or wire cloth can be used to advantage.

Another troublesome pest in the Southern and Western states is the ant. They crawl onto and cling to the bee, and seldom let go before the bee is dead. Having had considerable trouble with this little pest, I first put the hives on stands made of three pairs of legs and two pieces of 2x4 scantling, 16 or 18 feet long, and a foot or so from the ground; then I mixed some grease with a little white lead or tar, just enough to make it stiff, so that it would not run; then I painted a ring

about two inches wide around each post. This keeps them off the hives entirely, as they will not go over it; and after it has had two or three coats it will usually keep them off a month or more without renewing. My next move was to try to destroy them. I have succeeded to the extent that I have not more than one-hundredth part of what I formerly had. I have found the following remedies in the order named good for destroying them: Cyanide of potassium, one pound, 60 cents; dissolve in five gallons hot water, sprinkling sparingly on their nests. Also "Sure Pop" or London purple; mix dry with one-third part dry sugar. Also carbolic acid and coal oil. They can also be destroyed by mixing them up with water and the soil or by pouring boiling water on them. This ant pest is one of the worst, if not the very worst, pest in some localities.

Next we find the wasp or yellow jacket a sore trouble to some of our beekeepers. These can be kept down and eventually destroyed by a united and determined effort of the beekeepers. In the fall of the year when they begin to trouble the bees, take a small piece of wire cloth and tack it over a portion of the hive entrance. If the hive is weak, leave only a half inch opening. The bees will then be able to defend themselves. Then take some gallon lard buckets or crocks, mix about three parts honey to one part water; pour two or more inches into each vessel and put them where the wasps can find it; after they get a good start with it place a stick or two across the pails and throw a piece of burlap or cloth over them, giving the yellow jackets a chance to get into the liquid. If there are very many of them, if you have enough traps they can be caught by the thousand. If the slues of the pails or crocks are smooth they cannot get out—thus they soon die. The liquid should be strained off once each day and put back to catch more. Two years ago, being sorely troubled with wasps, we started in on a war of extermination against them, never dreaming of achieving such gratifying results, the object being to attract them from and keep them away from the bees. Though many times disheartened and discouraged, we continued the fight. The season closed with about one and a half bushels of wasps caught with a loss of only two weak swarms. The next season we caught about one gallon, and this fall we cleaned them out so close that we did not see more than four or five around at any one time. Now if our beekeepers will follow up the wasps with a determination, they can soon kill them off, for when the robbers are caught those in the nest will die.

The bees will not seek the traps as long as there is any honey coming in.

In some parts of the country some seasons the cows trample the bees, but we have heard no complaint from this source. It is easy enough to keep them from the bees by raising the hives a few inches.

We believe these are about all the pests of any serious nature troubling our bees here in Utah. We have dwelt on this subject because it is something which our beekeepers should be interested in, and we should also be

well posted as to the best method of preventing and destroying the pests if we would be successful in bee culture. It is an old adage that one ounce of prevention is worth a pound of cure. Now then, if our beekeepers will bear this in mind and if they will act at once when they see their bees attacked by these pests, they will find it much easier to keep them down and destroy them. Whether the ant or wasp attack a hive of bees in great numbers they can destroy the hive entirely in from five to ten days, hence the necessity of prompt action in destroying the pests and saving the bees. If our beekeepers do attend to these little matters promptly they will find it not such a great task after all, and in most instances they will be rewarded abundantly for their care and attention to the little busy bee.

This takes us back to the assertion that the one great need in beekeeping is proper management. While in order to be successful in obtaining good returns from our bees they must be kept strong, this not all that is necessary. In going around among our beekeepers the past season in many places we found strong swarms and still the owner got little or no returns from them. While there are other causes that produce those conditions, we find the principal one is that the bees are kept in little old, rickety hives, having little or no room to store honey, and the bees would be hanging on the outside of the hive. In one place we saw forty hives, twenty-five of them so covered with bees that we could only see the covers. We visited one gentleman that had some strong swarms of bees in dry goods boxes, some of them large enough for three swarms. He cut holes through the top of those and laid other empty boxes over them for the bees to fill, but the bees did not seem to see it in that way, for while the bottom boxes were mostly full, we found a little honey with one only in the top box. While we do not like to say so, we find it is the opinion of some of our beekeepers that there are enough bee owners but not enough beekeepers; but like the fruit industry, a few seem to be leading out and we believe that in the near future both of these industries will come to the front and will not only save but will be a source of revenue to the Territory. Our beekeepers have a double duty to perform: As beekeepers they are moving to build up the bee industry, and as fruit growers they have to try to instill into the minds of their brother fruit-growers that to cultivate a spirit of enmity against the little busy bee is not only unnecessary, but is unwise and injurious to the fruit industry, as they are needed for the proper fertilization of many fruits and plants. It has been demonstrated time and again that it is more injurious than beneficial to the fruit to spray trees while in bloom. This subject should be investigated by our fruit growing friends.

In conclusion we would say to our beekeepers, take good care of the bees through the winter, protect them as much as possible, but give them enough ventilation to keep them dry; attend to them in the spring—clean out the hives, do a little stimulative feeding if necessary; give them brine