

The following I culled from the *Lyttelton Times*, dated July 22nd, 1889.—“Ellesmere. A large quantity of clover seed has been grown in the district this year.—At the present time it is the most payable crop a farmer can grow; one man cleared at Irwell, over £13 an acre with his clover crop.”

The acclimatisation of the humble bee (*bombus terrestris*) then is an undoubted fact, and their utility in fructifying the red clover (*trifolium pratense*) from which much seed has been gathered “of superior quality to any imported into the colony,” has been acknowledged from several localities. Their dispersion throughout this Island is also a fact, besides which several nests and queens were sent last season to various parts of the North Island, and I have been informed that some have survived, and their humming buzz has been heard in several districts.

I trust this brief history of the little harbingers of the new industry, which is gradually but surely developing, will prove not only interesting to those who are deriving so much pecuniary benefit from their indefatigable labours, but also to those who condemned them, and questioned the value of the work for which they were introduced, and further I hope it will be the means of moving the liberality of all concerned, in aid of the funds of the Society that so persistently strove against every obstacle that presented itself, for several years preventing the introduction.

S. C. FARR.

Christchurch, 22nd August, 1889.

Coccinella Novæ Zealandiæ.

THE history of this little beetle is worth relating to New Zealand readers. Like many others it has led an obscure life, attracting no notice from anyone, save the prying coleopterist, or perhaps some unscientific person or child, who has been charmed with its pretty red coat, spotted with black, for the insect is a congener of, and nearly resembles, our English “Lady-bird,” so well known to and so much admired by almost every child at Home. But this insignificant little creature has proved itself to be the saviour of millions of pounds worth of property, and has saved from ruin a large number of persons dependent on the results of their orchards and orange groves. Had it not been for the presence of the *Coccinella Novæ Zealandiæ* in New Zealand it is very difficult to say to what enormous losses the Colony would

have been subjected. But I must explain. Some years ago (about twenty now) the *Icerya Purchasi*, or cottony cushion scale, now so well and unfavourably known, suddenly appeared at the Cape of Good Hope, California, New Zealand, and Australia, from whence, it is not yet known. In Australia it never gained much head; at the Cape it did enormous damage, but was ultimately checked to a great extent by several parasites, and amongst others a coccinellide beetle resembling the one we are writing of, called the *Rodoliæ Iceryæ*. In California, however, its course of destruction went on to such an extent that as Mr. Maskell said, "all that science could devise, backed by the most strenuous efforts of the fruit-growers themselves, was unable to stay its progress of destruction, and one only alternative seemed left to the unfortunate fruit-growers, viz., to cut down and burn their trees." Unfortunately, too, the pest being omnivorous, was "white on everything," and threatened to destroy not only the citrus trees, but almost every other vegetable growth as well. Already some of the largest growers had made up their minds to try fumigation (an expensive experiment) as a last resort.

It happened, however, that after doing considerable damage near Auckland, the *Icerya* met with an observable check. On a visit to Auckland in March, 1887, the writer of this paper thought he observed a diminution, but not a marked one, and he had not then an opportunity of investigating the cause; but next year, in the same month, passing through the city and environs, he was astonished to find the pest had absolutely vanished; so much so, that he could not even procure specimens to illustrate a lecture in Whangarei. On his return, having been informed that a Colony still existed in Wairoa south (about 20 miles distant) he repaired there at once, and found that the little beetle, *C. Novæ Zealandiæ*, was swarming amongst the *Iceryæ*, and devouring them in every stage with avidity; so much so, indeed, that hardly a single scale at that time remained alive, although the trees around hung thick with their empty ovisacs.

At this time the American Government had sent Mr. Koebele, a celebrated German naturalist, to Australia, to procure certain parasite flies, and other enemies of *Icerya*, which were killing it there, and the writer being informed by his correspondent Mr. Hamilton of Napier, that *something*, (what, he never could ascertain), was clearing off the pest, but that there still remained plenty of it to get parasites from—wrote to the State Entomologist of the Department of Agriculture, (with whom he was in correspondence),

to obtain permission for Mr. Koebele to remain over one steamer on his way back to California, in order that he might visit Napier, and if possible Nelson, where the pest was still rife, but said to be on the decline. After some demur on the grounds of expense, the United States Government, (fortunately for their fruit-growers,) yielded. Mr. Koebele sent on in the steamer in which he came from Australia, the *Lestophonus Iceryæ* flies, some predacious lepidoptera (*Thalpochares Coccophagus* of Weyrick) and a few coccinellide beetles, native to Australia (*Vedolia Cardinalis*), and landing in Auckland, proceeded to Napier; there, assisted by Mr. Hamilton, he discovered that the *Novæ Zealandiæ*, (the same beetle that was found at Wairoa South and other places near Auckland), was the agent that destroyed *Icerya*. He collected thousands of them, and, delighted with his success, telegraphed at once to California to stop all cutting down of trees. He wrote to me to say he had collected thousands, and to thank me for sending him there, "we are indebted to you for our good luck." In Auckland, Mr. Koebele showed many scientific men his treasures, which consisted of some 3,000 or 4,000 beetles in all stages, and displayed them in the act of devouring *Icerya* with avidity, declaring his belief that in a very few years California would be cleared of the terrible pest that had cost her millions of loss. Mr. Koebele left by steamer and arrived on the 20th March last, writing to me the good news of his having succeeded in bringing his valuable freight home alive and well. Mr. Howard also, the acting State Entomologist at Washington, wrote to the same effect, that was on the 20th March last; and, in so short a time, the Press of California, copies of which were received in late June, were glowing with the success of these beetles. giving the credit not to our New Zealand lady-birds (or lady-bugs) ugh! as they call them, but to the Australian ones, which, according to their account, Mr. Koebele brought with him from Australia on the 20th March. This, of course, is incorrect, the numbers distributed would prove it even if the date of arrival did not, as the people were furnished with these "lady-bugs," and one man alone states (*Rural Californian*) that he received 250 and another 137 in March, whereas Mr. Koebele did not get that many altogether. I think he stated the number from Australia at 137, and most of them were killed on the voyage by a fall of the ice in the cold room where they were placed. This, of course, is unjust to New Zealand, and would be ungrateful, but it does not come from any officially authorised sources, and it is not the first time the Californian Press have been careless in recognising such gifts. They did the same thing with Mr. Frazer S. Crawford when he sent them a present of his invaluable *Lestophonus Icerya*.

However, the main point is, that our little quiet beetle bids fair to save the Californian fruit-growers their millions. That is, if we may judge from the expressions used in their journals, which, even allowing for our cousins well known habit of boasting, are very hopeful. "Israel is saved!" "The fruit-growers happy!" "The Australian 'bug' gets away with the cottony cushion scale 'bug,' (everything is a "bug" in America.) "The *Vedolia Cardinalis* is the boss 'bug.'" "Who cares now for the history of the scale 'bug?'" Then Colonel Dobbins writes to the *Californian Rural*:—"I find that from the three trees that I put the original consignment (200) on, they have already distributed themselves over several acres. Look at that tree! Here I only put 50 and I believe there are a thousand on it now, and many have gone over on other trees." Mr. Walfskill of Los Angeles, who was in despair as to his groves, writes,—“I would not hesitate to plant orange groves anywhere in this section now that we have this parasite.” And Mr. A. B. Chapman, (the gentleman who had resigned his chair as President of the Californian Board of Agriculture, in despair from the ruin of his orange orchard, and who writes to *Insect Life* that all the money he can make from his orange and lemon trees goes in the purchase of washes, and all to no purpose, and that he has made up his mind to cut them down and go out of the trade, and in consequence sent in his resignation) now writes:—"My orange orchard was not worth one fourth of what it was formerly, since infected with this terrible pest, the cottony cushion, but with this parasite it seems to me that it has regained its proper value already."

No one could be better pleased than myself that the results which I have always confidently looked forward to and predicted in my writings have been so speedily brought about by the introduction of these beetles to California, particularly as more than one of our most eminent entomologists have often expressed themselves very doubtful of the success of the experiment. But at the same time, as a minor consideration, it is to be regretted that the Californian Press, which might be considered the voice of the fruit-growers of that country, should so little trouble themselves as from whence the saviour of their millions came. Probably in their indifference to so small a Colony as New Zealand, they class all these islands as "Australia," and so long as they have attained the benefit of the importation, care little to what country it is due.

The action of these beetles is a subject of great interest to the

economic entomologist, never has it been equalled in the annals of entomological history, and if a proof were wanting that nothing has been created in vain, this is a most striking one. Here we have a small and obscure little insect, whose very existence was hitherto almost unknown, performing with ease what the utmost efforts of science and the utmost exertions of an energetic people have in vain endeavoured to bring about, and not only that, but doing more to save the wasted millions in two or three short months than has been accomplished in twenty years. Well might our little red coated hero exclaim with a greater hero, (who, however, had much less good to boast of), "*Veni, Vidi, Vici.*"

R. ALLAN WIGHT.

Entomological Notes.

ICERYA PURCHASI.

MOST readers, even those who do not take special interest in entomological matters, must know that this terrible insect has done millions of pounds worth of damage to the growers of fruit, and especially of citrus fruits, in the Cape Colony, Australia, and more especially in California, where for twenty years it has set all the efforts of science and labour at defiance, even to check its progress, and driven orange-growers to the verge of cutting down their once productive groves. But comparatively few are aware what a narrow escape New Zealand has had; about six years ago the pest had begun to be severely felt in several provinces, in Nelson and Napier its ravages were beginning to be serious, and in Auckland, considerable damage had been done, including the entire loss of Mr. Reader Wood's valuable lemon grove, which was bringing in some £300 a year profit. Suddenly in Auckland the progress of the destroyer was checked, and in a wonderfully short space of time, almost within a year, it seemed as if swept from the face of the earth by an invisible hand. It was discovered that a small coccenillide beetle, or ladybird, was in swarms amongst the *Iceryæ* and devouring them with a voracity that was truly astonishing. Around Auckland the pest and its destroyer were virtually gone, but at Napier there yet remained an abundance of both, and for that reason the U.S. Government were advised to send over a competent person to procure supplies of the beetle for California. Some three or four thousand specimens were procured, and