

have increased in size. As an illustration, take the island of Cyprus, which, added to a sterile soil, has dry scorching winds, parching everything in the form of vegetation. The inhabitants of this island never feed the bees, therefore those only survive such an ordeal which possess the greatest endurance and the largest amount of stores. Where these are colonies equal in numbers, and some of them store surplus while others are starving, it shows conclusively that some of them possess attributes which are lacking in others. They may have stronger wings, and can fly farther and faster, or have larger tongues, which enables them to reach nectar which the others cannot, or have larger receptacles for carrying pollen, thereby enabling them to rear more workers.

This fall I was showing a visiting bee-keeper a feeder which was merely a solid block of wood with holes cut into it by a wobbling saw, into which the feed could be poured. He remarked that if I put that on the hive, full of syrup, in a short time it would be full of drowning bees. It had been given to me for trial, and I had never used it. As I was then feeding a colony short of winter stores, I filled it and put it on a hive. When I went to look after it I found the feed all gone, the feeder dry and clean, and no dead bees in it.

I then filled some wooden butter dishes, and found that without any floats it was all carried down, without any being drowned. I was puzzled at this, for if a vessel of earthenware, tin or glass had been used in this way it would have been full of drowning, writhing bees. It was made plain at the convention why this is so. When a bee walks on wood, his tarsi or feet take hold with a sort of grip, but he cannot do this on a smooth surface like glass. When a bee's feet are dry, and it walks upon glass or tin, its feet secrete a sticky substance which enables it to hold to the surface.

If a pane of glass is examined with a microscope after a bee has run up and down it, its tracks can be seen, and this is what discolors the white comb, if it is left long on the hive after it is sealed. I have often noticed that glass was sticky after bees had been running up and down on it, and supposed that it was a wax secretion. The delay of winter has allowed the bees time to get ready for cold weather.

MRS. L. HARRISON.

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Convention Notices.

The next regular meeting of the Norfolk Bee-Keepers' Association will be held in Delhi on Saturday the 2nd of June. All interested in apiculture are invited to attend.—C. W. CULVER, Secretary.

From the Rural Californian.

DRONES.

SOME bee-keepers are of the opinion that drones were only made to be killed, and that any and all means employed to root them out of the apiary is commendable, and just there they make a serious mistake. We have repeatedly asserted that the drone is a prime necessity in a hive; that an abundance of them will insure success if they are the right kind; that the drone determines, in a great measure, the quality and usefulness of the worker bee, and is responsible for the blood and good behavior of the queen bee. It is true the drone gathers no honey, and don't seem to want to employ his leisure moments at any particularly laborious business, but, nevertheless, he does a vast amount of good and very important work. When the foundation comb is put into the hive the wax forming it must be heated until it is so pliable that the workers can draw it out into comb to be filled with honey. The animal heat generated in the hive by the big drone does the warming up of the wax so that the worker can draw it into comb. The drone maintains the heat in the hive necessary to hatch the eggs of the bees, drones and queens, for all three of the different sorts of eggs are being hatched at the same time, and the prosperity of the hive depends largely upon the full development of the rising generation of bees, which cannot be secured in its greatest perfection by any means so well as by a good, strong, healthy contingent of drones holding the fort, until the temperature of the hive reaches that point where their presence is not required, then the drone takes an airing and enjoys himself buzzing about the hive until the temperature is lowered and the drone goes back to his occupation of making things warm in the hive. Virgin queens are not nearly so likely to be lost where the apiary is well supplied with drones as where they are scarce, for the queen in her maiden flight finds a mate so near home that she hardly ever misses her own hive on her return. Much more could be said truthfully as to the usefulness of the drone in the hive and apiary but the above ought to entitle him to a place in every hive.

THAT CITY ORDINANCE.

We were at E. C. Burlingame's office on New High street just opposite the jail, on the morning of the 11th of April, and while there observed a swarm of bees hovering, or rather "roaming at large," at the New High street entrance of jail. We thought of that city ordinance that imposes a penalty of five hundred dollars upon any person who keeps bees within the corporate limits of Los Angeles city, and here were our little friends.