

the sap is suddenly checked by the attraction of light, causing too high a pressure in the cells.

If the interruption continues above a certain degree the leaf suffers and falls prematurely. It is a question whether it is always high temperature and attraction of light which cause it, or whether it is not sometimes due to a sudden change of temperature, as, for example, after a cool spring night, when a tree in its dewy state and with low vitality, receives the attraction of the intense morning moonlight.

Frequently I have observed on young limes, where few aphides could be found, that the drops that should have been sprinkled on the leaves by these insects were abundant on the highest and tenderest leaves, where in general none of the aphides locate themselves.

#### The Flight of Bees

The bee can, as every bee-keeper has observed, not only fly backwards, but also suddenly stop while she is in full flight. She causes this sudden check through the changing of her inclination of the planes of her wings, as well as by strong contrary vibrations of the wings, after the manner of the bird when it wants to stop in the middle of flight. But she can also do it through an answering movement of the abdomen through which she alters her balance or equilibrium.

This power makes it possible for her to increase the speed of her wings, or to decrease, to fly backwards, or sideways, up or down, as well as in the quickest flight to stop when she discovers a flower that she fancies to visit.—*From Leipg. Bztg.*

#### BEE-KEEPING IN SOUTH AFRICA

We often hear that South Africa is the only country in the world where disease is unknown. South African bees are singularly free from the serious diseases known in other parts of the world, climatic conditions and freedom from predisposing causes, being undoubtedly

helpful in this direction. Foreign bees were being largely imported into the different colonies, and from time to time there have been scares that "foul brood" had broken out, but any suspicious case has been drastically dealt with. The Government very wisely took up the question before it was too late, and by means of legislation stopped the importation of bees, honey, and wax into the country. The law has now been modified so that comb foundation only is now imported, but it must be accompanied by a guarantee that it has been sterilised, and been kept at a temperature of 212 degrees for two hours; this, of course, does not improve the wax, but is an absolute safeguard against carrying diseases in any form.

In April, 1911, a stock was found showing signs of foul brood. Samples were sent to the Chairman of the B.B.K.A., Mr. Cowan, and he reported that the foul brood bacilli were present, but were not identical with those in Great Britain. When this was reported to the Government Agricultural Department they at once had the hive, bees, and all appliances destroyed, and compensated the owner; they also appointed a temporary inspector, who visited all the apiaries round the district. No serious cases of disease were discovered, but in some instances bees were found very badly kept.

Just before I left the country I was asked by the Government to inspect again, and visited all the apiaries near Johannesburg, going very carefully through all the colonies I found one bad case, and I watched it carefully. At the end of a fortnight this stock was almost healthy, no sign of disease appeared in the brood and honey was being brought in abundantly. At an altitude of 4,500 ft. above the sea-level I do not think disease will flourish, but I am sorry to say some of the beekeepers are very careless and the colonies do not receive proper attention.

South African beekeeping, the best flora in the world is very suitable for the temper of some to be very un- tell you there any reason, and poultry, dogs, and cattle. I think a reason for the the temperature ritability. I have in this state, and the like again. will in time be modern methods, best tempered bee in selection of s avoiding the other tact with the bees will also eliminate ance, and these avoided. I know farmer lost £1000 v his calves being have found that th African bees are think the native be to sounds and disa the bees at home, a due to the rarity The native bees of S to be smaller than t are various differen in the inmates of colour, size, and ma bee are very definite. in his book; "At t bright yellow kind, characteristics of t shade of Eastern ma smaller and darker b docile." Neither of we can call them su from the same hive bo are often found, and s which must not be co