

irritation will be carried by the leg nerves to those nerve cells of the spine which are below the point of injury and which closely resemble the ganglia of the insect.

BEES AS FERTILIZERS.

Nothing in nature is more astonishing than the fertilization of flowers and fruits by bees. There seems to be the closest sort of relation between these insects and the vegetable world, the latter depending upon them to an enormous extent for the propagation of its species. Darwin and Gray have both written entire books on the wonderful ways in which orchids of various kinds are fertilized by bees that carry pollen from one blossom to another. One sort was discovered by the latter writer to absolutely require a fight between two bees in order that its own fertilization should be accomplished, one bee entering a small tunnel at one side at the same time that another comes in at the opposite end, the consequence being a scrimmage, in the course of which the pollen grains which they brought on their bodies are scattered upon the stigmas. If it were not for bees the orchards and fruit patches would be largely barren.

THE APPLE AND THE BEES.

Take the apple, for example, which from the botanist's point of view is five fruits in one, demanding for its perfect development the fertilization of five independent pips or ovules. Now and then one will come across an apple that is shrunken on one side, which means that one or two of the ovules have missed fertilization. This work is performed chiefly by the bees as they go about from tree to tree gathering honey from the blossoms and at the same time conveying the pollen from one blossom to another. In the case of the strawberry, for each little fruit there must be from 100 to 300 distinct fertilizations, in order that it shall attain perfection, and this task is performed by the bee as it sucks nectar from the original flower. If any stigmas remain untouched by pollen the strawberry in that spot remains hard and shrunken, even when the fertilized portion is fully ripe.

Thus it appears that the honey stored away by bees is, from the point of view of mankind, only a very small part of the value which they produce.

SUPERSTITIONS ABOUT BEES.

There are ever so many superstitions about bees besides the one referred to at the beginning of this article. In some countries it is customary to drape the hives in mourning when the owner of them dies, and elsewhere it is the practice to go through the ceremony of telling

the bees that their master is dead. Is it not Whittier who wrote that exquisite piece of verse entitled "Telling the Bees?" In that poem this curious and interesting custom is described. When their owner dies it is supposed in some localities that the bees follow him to the grave, a notion which seems to be derived from the fact that these insects are apt to alight on the fresh varnish of the coffin, their object in so doing being to gather a substance that will be available for varnishing their cells. In Sicily and many other countries it is regarded as very bad luck to sell bees for money. They must be traded for, if possible with sheep, although the purchaser may go at night and leave cash for a hive secretly, taking the latter away at the same time.

BEE CULTURE AT THE DEPARTMENT OF AGRICULTURE.

At the recent meeting of the North American Beekeepers' Association in Albany the president of that organization spoke in favor of the establishment of a first-class apiary at Washington, to be in charge of the Department of Agriculture. Thus it would be possible, under direction of government experts, to conduct scientific experiments in bee culture, testing the qualities of different races of these insects and publishing bulletins from time to time for the enlightenment of persons engaged in the business. There is enough money in the industry to render it deserving of more attention than it now receives at the hands of farmers. It is peculiarly agricultural, since the honey is got from plants and the latter are fertilized by the insects, and it would appear that every reason exists for endeavoring to foster it.

A Cheap Mucilage.

A VERY convenient mucilage can be made out of onion juice by any one who wishes to use it. A good-sized Spanish onion, after being boiled a short time, will yield on being pressed quite a large quantity of very adhesive fluid. This is used quite extensively in various trades for pasting paper upon tin or zinc, or even glass, and the tenacity with which it holds would surprise any one on making the first attempt. It is the cheapest and best mucilage for such purposes, and answers just as well as many of the more costly and patent cements. Some of the cements sold by street fakirs at ten cents a bottle consist of nothing but onion juice and water, and the bottle and cork cost a great deal more than the contents.