

that if she has it at all it is very defective. Not only are bees aided by their color sense in finding flowers in which nectar is stored, but this sense is so acute that they are able to distinguish between the various shades of color, and have their favorites among them. Muller says in his work entitled "Alpine Flowers" that yellow is the bee's favorite color: but Sir John Lubbock by a far more elaborate and careful series of experiments has conclusively shown that blue is distinctively their favorite color. This seems all the more strange when we reflect that Nature throughout her whole domain has endowed every organized thing with the means best adapted to the end in view. If blue be the bee's favorite color then we would expect that blue would be the prevailing color among nectar-secreting flowers, but we know this is not the case, for of all colors in the floral world blue is among the least frequently met with. White is the most prevailing color, and of white flowers a considerably larger number smell sweetly than of any other color; over 14 per cent. of them are odoriferous, while but 8 per cent. of red flowers smell sweetly. We would be led to conclude from this that white would be the favorite of the bee, but such is not the case. The reason must be left to some one better able to determine. Sir John Lubbock ventures an opinion on this subject. His opinion that all blue flowers are derived from ancestors originally green, that they have passed through stages of white or yellow and generally red before becoming blue; that the blue flowers are a highly specialized form of those originally of a different color, and that a larger proportion of blue flowers contain concealed honey than do flowers of any other color. This may be the secret of the bee's preference for blue.

R. MCKNIGHT.

Owen Sound, Jan. 18.

G. M. DEMAREE.—Laying aside all romance, and all guesses, I have found by actual observation, that the richly-colored flowers, as a rule, produce very little nectar. Our best honey-yielding flowers are decidedly *modest* in color and general appearance. I have seen bees searching among grass and weeds for tiny "bits" of flowers that the ordinary observer would pass without notice.

In my opinion, and I have not arrived at it hastily, bees rely upon their instinct and industry to find nectar, more than on any organs of sight or smell that they may possess. I am quite certain that the color of the flowers has little to do with it.

Christiansburg, Ky.

MRS. L. HARRISON.—How do bees know when there is honey in the flowers? Is it by instinct, or are they first-rate smellers? Do gay colors attract them?

During any warm day, if I melt wax, and have the door or window open, the room will soon be alive with bees, and they will even try to get down the chimney. Dear me! let the wax run over and burn, and there will be a bee-convention in short call; or melt honey, and drop some on the stove. Is this instinct or do they smell?

I have a plum-tree out there in the garden that never fails to produce a magnificent crop of blossoms, and is fragrant. Sometimes I am tempted to put honey on the blossoms to induce the bees to roam over them, but they know the flowers are no good, and will not produce plums, and there is no work for them to do. They cannot afford to spend their time enjoying the sweet fragrance, and hovering over the delicate white bloom, for pleasure only; they want profit.

If gay colors attract bees, then they ought to hold high carnival over a red clover field, for they could find both bright colors and fragrance. They are not like Oscar Wilde, for they pass great Russian sun-flowers that are over a foot in diameter, and hover over a flower so tiny as to be almost imperceptible. The great bright peonies of our grandmother's day, and bleeding-hearts of our own time, are passed by for the modest white clover.

PROF. D. H. PAMMEL.—On page 700 A. B. J. Mrs Mahala B. Chaddock takes objection to the statement that changes in color of flowers, after they have been pollinated, and the secretion of nectar has ceased, is developed for the apparent purpose of indicating to insects that their services are no longer needed, thereby saving them much waste of time in probing such flowers.

In many flowers the fertility depends upon the insects which visits them. The more frequent the visits of insects the greater the fertility. So that color as a guide is not only advantageous to insects which visit flowers, but the plant in return is capable of producing more and better seeds, thus giving it a better chance in the battle of life.

That odor is important in attracting insects is an established fact, which no one disputes. Most naturalists agree that color is an important factor in attracting insects to flowers, and that they have done much to develop the color in flowers.

In nearly all of the brightly colored flowers pollination is affected by insects, as in mints.