

world of his own. He needs no other intoxicant to complete his happiness. Horticulture is one of the fine arts ; it requires the skill of a master. It is just as impossible for the thoughtless, brainless clodhopper to reach the highest round in the ladder in propagating fruit as it is for him to appreciate after it is grown. But after all man's skill in planting, after ransacking the earth for improved varieties, after propagating, grafting and hybridizing, he must rely mainly on Nature's methods of fructification. The favoring winds and industrious bees are needed to fertilize the bloom to insure a harvest of fruit. As a means of accomplishing this end, there is no question but that the bee is of great service to the grower of fruits ; no other insect is multiplied in such vast numbers so early in the spring when their agency is so much needed to fertilize the orchards and small fruits. If the wind were the only means of carrying the pollen from flower to flower, how often would perfect fertilization fail from too much or too little wind during the brief opportune when the bursting buds are sighing for the life-giving dust from the neighboring flowers.

Not only is honey provided in the delicate chalices to entice them, but the pollen so essential to the plant (and just as essential to the bee in furnishing the proper food for its young) is placed in close proximity to the nectar, so that in getting either, the bee is unwittingly carrying the dust from flower to flower, working out the wise plans of Providence as relates to plants, and catering to man's pleasurable taste at the same time. The drop of honey is placed then in the flower not because it is needed to perfect the flower or fruit, but to tempt the bee to brush his hairy legs against anthers and distribute the golden dust. So the bee introduces itself to the horticulturist at once as his friend. The latter ought to meet it half way and acknowledge its two-fold service. It does him a service while on its daily rounds in search of food for itself and young, and again by storing up for his benefit the liquid sweets which it does not need itself, and which ungathered vanish like the morning dew, like the manna which the Israelites ate of. The ungathered portions melted "when the sun waxed hot."

What, then, is there to hinder those two vocations from going hand in hand, since each is helpful to the other ? They ought at least to be on friendly terms. Each furnishes inducements for the other to exist.

But, aside from these considerations of the healthful diversions and pleasing variety of mind, and returning again to the utilitarian side of the question, the horticulturist will find it

profitable to pursue the study and practice of this delightful branch of Entomology. The habits and instincts of this "pattern of industry" are ever interesting and the business quite as remunerative as raising tender fruits in an "iron-clad climate." This pursuit, once entered upon possesses charms of its own. No other stimulus is needed to follow it than the fascination of its own creations. A great deal has been said about bees injuring fruit—some fruit-growers having charged that they puncture the ripe grapes, suck the juice and destroy the crop. But from the physical structure of the bee this is said to be impossible by scientific entomologists. It has no jaws like the hornet ; it is made to suck not to bite, and after close observation, and after repeated experiments, it has been found that where bees are discovered helping themselves to ripe fruit that the skins had been ruptured by the weather or from over-ripeness, or that hornets or wasps or birds, had first been the depredators. After the skin has been broken from any cause, if there is a scarcity of honey, the bees, always anxious to be doing something, will endeavor to get a share of the plunder. Therefore as to bees injuring fruit, I, as their attorney, shall claim to the jury that the charge is not proven.

In dismissing this subject, which to the lover of fruit, flowers and bees is always a source of infinite delight, I cannot refrain from quoting a few lines from "The planting of the Apple Tree," by that venerable sylvan poet, our own Byrant, who saw so much of future hope and byrant as he sifted the soft mould about its tiny rootlets :

"What plant we in this apple tree ?
Sweets for a hundred flowery springs
To load the May-winds' restless wings,
When from the orchard row he pours
Its fragrance at our open doors
A world of blossom for the bee."

QUERIES AND REPLIES.

UNDER THIS HEAD will appear Questions which have been asked, and replied to, by prominent and practical bee-keepers—also by the Editor. Only questions of importance should be asked in this Department, and such questions are requested from everyone. As these questions have to be put into type, sent out for answers, and the replies all awaited for, it will take some time in each case to have the answers appear.

Uniform or Variable Temperature for Wintering.

QUERY No. 168.—What temperature is most suitable for bees to pass the winter in ? Should it be changeable or steady ?

M. EMIGH.—48 ; steady.

G. M. DOOLITTLE.—45° ; steady.