

In some varieties we have the staminate and pistillate blossoms on entirely separate individuals of the plant, such as hemp, the willows, some varieties of strawberries, etc. Besides the flowers that could not of themselves become fertilized, it is a law of nature both in the animal and vegetable kingdoms, that what is known as in-and-in breeding is detrimental to the vitality of the plants or animals. This consanguineous intermarriage of plants is avoided through the agency of insects, they carrying the pollen from plant to plant or from flower to flower.

To some of you this may all appear as mere theory. To such I will say investigate the matter a little; see what Darwin and others have been doing, keep your wits about you, and you will find the intimate connection of the different divisions of nature and their dependence one upon the other.

I will conclude by quoting a few paragraphs from a translation of the German Text Book of General Botany:—

1st. The bees are the greatest promoters of cross-fertilization, not only among the Hymenoptera, but among all insects whatsoever.

2nd. While our native flowers are many of them dependent upon insects for the transference of pollen, the process of cross-fertilization is in many tropical species always effected by birds, which visit the flowers on account of their nectar.

3rd. We thus see that in the tropics there are not only wind and insect fertilized flowers, as with us, but also certain which are bird fertilized, namely, plants in which the transference of pollen is effected by humming-birds.

ANSON GROH.

## 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.

### USING LIGHT SECTIONS.

QUERY No. 192.—Is there any plan or system by which small or light sections may be filled without shortening the crop, and if so describe it even at length?

DR. C. C. MILLER.—I doubt it.

DR. DUNCAN.—I don't know of any.

ALLEN PRINGLE.—See answer to query 191.

O. G. RUSSELL.—See my answer to query 191.

PROF. COOK.—I do not think the size or weight of sections make much difference.

G. M. DOOLITTLE.—Our Michigan friend uses bent or short pieces of shavings put in a large frame, but so far I have no use for small sections.

H. D. CUTTING.—Have had no experience with sections smaller than  $\frac{1}{4}$  lb., but from my own experience with small sections I would not use smaller than 1 lb. unless the demand was large and prices enough higher to warrant the extra work.

J. F. DUNN.—I could never see any difference in the amount of honey stored in the ordinary pound sections and the brood frames. It is quite reasonable to suppose there should be a difference, but do not think there is any providing both are filled with foundation.

### Moisture Removed at the Entrance.

QUERY No. 193.—Can moisture be carried out of the hive and supers as rapidly at the entrance as by top ventilation?

ALLEN PRINGLE—No.

DR. C. C. MILLER—I doubt it.

G. M. DOOLITTLE.—Perhaps, with no draft in either case.

O. G. RUSSELL.—My experience has taught me it cannot.

PROF. COOK.—In practice it seems to make no difference. I wish no opening except at entrance.

H. D. CUTTING.—Top ventilation will remove it faster than at the entrance. But why don't you give us the conditions.

J. F. DUNN.—No, I do not think so. But a very little top ventilation goes a long way with me.

DR. DUNCAN.—No, moisture will escape at the top of the hive more readily than any other place, but in cold weather the heat of the inside would escape with it and would be injurious; better have it escape at the entrance. If you keep the hive warm inside there will be no moisture to injure them.

### WORK IN SECTIONS.

QUERY No. 194.—What method do you advise to induce bees to commence work in the sections?

G. M. DOOLITTLE.—By having nothing but brood in the brood-chamber.

DR. C. C. MILLER.—Put in the super a section which has previously had honey in it.

PROF. COOK.—I have found contracting the brood-nest excellent; also using some sections