

It is quite interesting to watch the different actions of just hatched workers and drones. The worker, true to her name and office, begins to crawl over the combs as if to feel her legs, stops occasionally to clean herself up, and before long helps herself to honey from an open cell. The drone, on the contrary, is a born dependent. The first act is to touch the nearest worker he can reach with his flexible antennæ, and, begging to be fed, he is at once supplied with honey disgorged from the proboscis of his attentive nurse. And so he goes on all his life, seeming to prefer to be fed, although perfectly able, if needs be, to help himself.

A very bad name has always been given the drone. Virgil has his fling at him, stigmatizing him as having no proper office in the economy of the hive—seeking only to devour the stores which he had no share in collecting. I wonder what the poet was made for! or as he says that the bees collected their young from the flowers, being too chaste to breed them, what motive he could have thought they had to gather in such useless consumers! And yet without any special pleadings how much can be said in his defense. It is only too evident that his proboscis is too short to suck honey from the flowers; that his legs have no pollen baskets; and that he can secrete no wax. Great as his bulk is, he has no sting, and can do nothing for the defense of the commonwealth; but then, without him that commonwealth could have no existence. The sole object of his life seems to be, at the proper time, to fertilize the young queen—and this he is always ready to do. Now why should we blame any creature which fulfils the special object of its creation? And yet I fear me in spite of all that can so justly be said in his favor, our poor drone will always be cited as an incorrigibly idle reprobate, who meets with only his just deserts when after a life of pleasure he is killed without mercy by the industrious workers. He will always be known as Shakespeare's "lazy, yawning drone."

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From American Agriculturist.

#### BEE NOTES FOR OCTOBER.

**D**URING the present month, colonies should be well protected from the cold. All openings for ventilation should be closed, and the entrance to each hive contracted. If care be used in this respect, breeding may be continued much later, which is extremely desirable. Surplus combs, which have been used for extracting, should be removed, and general preparations made for winter. If bees are to be

wintered in doors, it is all important that the room be clean and sweet, and well prepared for the bees. Many who propose to build, or arrange a new room for this purpose, neglect doing so until too late in the season. If a wall is to be laid, or plastering done, or even green lumber is to be used, the work should be done early, so that all may become thoroughly dry. Facilities for thoroughly ventilating a wintering room should be supplied. The manner of storing the bees in winter quarters will be described later. Some do not have facilities for wintering bees in-doors, and other persons advocate wintering out-of-doors, in preference to in-doors. While I strongly advocate wintering in the house, I am aware that it is better to winter out-of-doors under favorable conditions. As to the needs for out-of-door wintering: It is well known that bees do not winter so well upon their summer stands, as they formerly did. The cause of this, I believe to be, that the country being so thoroughly cleared of its forests, the winter winds are more cold and searching. This being so, we must resort to some means of giving our hives protection. First, then, it is important to select as sheltered a place as possible to set the hives. Next, it is generally agreed that some kind of packing is necessary. Last winter I made some experiments in out-of-door wintering, the results of which were of value to me. The outer cases of my hives were large enough to allow about four inches of packing on all sides of the brood combs, and six inches on top. I used both chaff and dry sawdust for packing, and both proved successful. The hives were tipped slightly to the front, so that the dead bees were easily removed. The brood combs were raised about an inch from the bottom board, so that room was afforded for the dead bees to drop below the frames. A large entrance stick, to fill an entrance one inch deep and as long as the entire front of the hive, was supplied, with a small opening in the centre of it. This entrance stick could be taken out, to remove the dead bees when necessary, and replaced to protect the bees from cold. Next, and most important of all, the hives were surrounded with a perfectly tight enclosure. This I consider of extreme importance. Experience has proven that bees can stand extreme cold weather, if not subject to drafts of cold air. Some of my experiments, which have brought me to those conclusions, which have been dearly bought and I urge those who have not had experience, to consider them well.

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