

facts that I have observed, it suggested itself to me last July that this membrane may contain scent glands, and these, when the membrane is exposed, are stimulated to produce a certain scent which the fanning of the wings helps to distribute, and which forms an important means of communication, by attraction, between the members of a swarm or colony.

One may frequently see a few bees standing on the alighting-board of a hive humming and protruding the above-mentioned membrane, especially during and after a general flight on a warm day in spring. If these are watched it will be noticed that they cease humming occasionally and walk a few steps nearer the entrance, where a halt again is made, and then the protrusion of the membrane and the humming are recommenced with greater force. These actions are continued alternately until the bee often only finally stops them far inside the entrance. This process is evidently not for the purpose of ventilation. It is apparently the instinctive action of any bee that has, after more or less difficulty, found the entrance of her hive, and while it is evidently an act of pleasure, it also answers the far more important purpose of indicating the position of the entrance to others outside who may be still searching for it; and thus the one or two bees that "call" may be the means of guiding into the hive hundreds of their comrades that otherwise might have perished outside. It is interesting to note that when a far larger number of their comrades are in search of the hive-entrance, as in the case of a swarm, the "calling" instinct is much more easily excited, and its effects are more marked than at other times. One instance that came under my notice when I first suspected the function of the above-mentioned membrane, last summer, struck me as being very re-

markable, but probably many bee-keepers can recall similar experiences. A large and restless double "cast" was hanging near the ground in an old quick-hedge behind my apiary. The bees had "balled" two or three if not all, of their queens, and seemed very excited. I did not know from what hives the swarms had come, so I fetched an old fertile queen I happened to have in a cage, and held the cage to the swarm. Twenty or thirty bees immediately gathered on the cage and set up the well-known "joyful hum," protruding the before-noticed membrane to its fullest capacity. I then tied the cage, with the bees on it, up in the skep, which I placed on a large board on the ground close by, and shook a few bees on to the board. These also started humming vigorously, even one of them, and raising their abdomens they protruded to the utmost the membrane. I remember being struck with the fact they did not immediately run into the skep as one would have expected; but they all stood still, clearly for the purpose of attracting their comrades composing the cluster. But this is not the point I wish to illustrate. As soon as the bees on the board began "calling" the whole cluster, though over a foot away, was visibly affected, and the bees began rushing together, forming "points" in various directions. One "point" was formed in the direction of the ground, and the bees at this "point" (which was nearest the board), became more excited than those at the other "points." The "point" quickly extended down the tree and along the ground until it was only a few inches from the "calling" bees on the board. The bees at this "point" then began to "call" too, and presently the magnificent spectacle presented itself of a broad stream of bees pouring pell-mell in the great