

serves its general form and its own individuality. It resembles a human being with a slow-moving brain, for we have seen that the ruling committee requires considerable time before a decision is made and carried out. Again, the individual bee does not reproduce itself. What is reproduced is the individual formed by the whole colony, and this act is called swarming.

"Swarming among bees is generally due to the hive becoming too small for the increased population, and it occurs as a rule at the end of spring, when it is too warm for so many bees to live under the same roof. The hive selects a new queen; and the old one—not the new one, as has often been supposed—prepares to go forth to found a new hive with the surplus population. Before their departure special searchers are sent out to hunt everywhere in the neighborhood for some old chimney, some crack between blinds, or a hospitable hollow trunk, where the new hive may be formed. It most often happens that no such shelter can be discovered. But they must go forth, nevertheless, for they are in reality driven from the old home. But those who stay behind are not too cruel and selfish, for each emigrant is provided with a good store of honey from the common stock. In case no suitable spot has been found for the new hive, the bees swarm on a branch of a tree, and then move on from branch to branch, the number growing smaller and smaller till it quite melts away.

"If this first swarming has not sufficiently relieved the hive, a second one may take place. You can easily know in advance if this has been determined upon by the council; for, if another swarm is to be formed, the young queens who are still in their cells are not killed, and, to know whether this is so or not, you must listen in the evening to what is going on within the hive. The young newly-born mother utters a peculiar chant—tih-tih-tih; while the queens still shut up in their cells reply, konah-konah-konah. If you hear these sounds, you may be sure that

a fresh swarm is about to quit the parent hive.

"An objection might be raised to this idea of bees being associative. It might be said that a hive is not a society, but a family, since the bees of the same hive are sisters. But this objection can be easily refuted. Thus, we have seen above that during the height of the honey season some bees mistake another hive for their own and are well received by the hive into which they have strayed. Again, the experiment of changing the queen of a colony has shown that this may be done several times. You may put in a hive of Italian bees a Carniolan queen, or vice versa; and yet the society formed in this way by bees of different origins will go on creating, working and planning just as well as it would if none of these changes had been made in it.

"A beehive, therefore, is a perfect example of the equalitarian product of state socialism, where is neither love nor self-devotion, neither pity nor charity; where everything is sacrificed to society and the welfare through ceaseless labor; where there is no government, no rulers; where there is discipline without subordination. It is the realization of ideal collectivism. Motor-cars and balloons may some day perhaps bring about the universal association of men. But if humanity is to be kept on earth only by the sacrifice of individuality, as among the bees, by the sacrifice of every joy and every virtue, we should not be surprised if, some morning, the fancy should seize man to swarm to another planet!"—*Literary Digest*.

THE HABITS OF THE BEE AND SOME MISAPPREHENSIONS

[By Everett F. Phillips, Ph.D. Fellow for Research in Zoology, University of Pennsylvania]

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prior to all experience, to perform certain actions tending to the welfare of the individual or the perpetuation of the species, apparently without understanding

the object at which they aim or without the best methods to accomplish their actions of the kind. By newly-hatched bees can see no cause that whenever a certain action which and for which he information, he this pile of "instinct" effort to find a cause that what we so but actions which I believe, and I am that every instinct in the structure of environment, and we to arrive at the actions we have taken. There is a tendency to think that when things, and can use they understand the question, but we this. As an example of the duties of the Briefly, they work the first day or two then work on account of but they soon take the hive, such as the developing larva. Later, general to nineteen days from the hive, and any of the inside work they did before. (understood that we change their action normally happens.

course, fly from the their exercise flight but they do not go out that they can their sense of smell through this cycle?

say that instinct in these things, but how about it when the impulse unless