males and females. While keeping several colonies in artificial nests it occurred to me that the change from the ordinary to the replete worker must begin during the callow stage while the integument of the gaster is still very soft and distensible. I accordingly isolated a number of young callows in two of my nests and fed them with maple syrup and cane sugar water. They partook of the substances greedily, and a few of the workers in each nest gradually began to assume the replete condition. During the course of four to six weeks several of them became what I call semirepletes (McCook's "semirotunds") and four of them, three in one nest and one in the other, actually attained the dimensions of the perfect replete. Most of the workers, however, showed no inclination to assume this form. In most cases, as McCook has shown, it is the major workers that most readily tend to become repletes, but this is not an invariable rule. In the honey chambers of opulent colonies I have usually found a few replete mediæ and minimæ hanging among the larger but no more turgid sisters. Thoroughly hardened workers of the ordinary form, according to my observations, are no longer able to become repletes. It is probable, therefore, that McCook's failure to secure repletes from isolated major workers was due to his using individuals that were too old.

Why certain callows should aspire to become animated pots or casks, while others prefer to be active foragers and providers, is an enigma. I do not believe, however, that this is due to differences in the "structure or form of the intestine and abdominal walls," as McCook suggests. It is more probably an unusual example of the division of labor, which is shown by careful study to exist in various forms and degrees among all ants with monomorphic workers. The individual worker performs different duties at different stages in its life, beginning in its callow stage as a mere nurse, then becoming a forager, warrior or guard and in its old age sometimes encroaching on the function of the queen by becoming a parthenogenetic mother. It is not improbable that many worker ants acquire habits — using this word, for the moment, in its restricted and technical sense as employed in human psychology — and tend to perform throughout life the special function which they happened to assume while in the callow stage. This may account for the development of the replete both in the individual and the species not only in *M. horti-deorum* but in all other honey ants.

While excavating the nests above mentioned, I was impressed with certain peculiarities in their structure and situation, which seem to be explainable only as adaptations to the development of repletes. One of these peculiarities is the great hardness of the soil that is preferred by the ants. This is the more astonishing because the workers are such slender and delicate organisms. It is evident that hard soil is best suited to the construction