myrmica chamberlini has lost its wings, but apparently so recently that it still retains the typical male structure of the head, antennae and thorax, even to the development of the Mayrian furrows. In several other genera (*Formicoxenus*, *Cardiocondyla*, *Ponera*), however, the males have acquired the same structure of the head and thorax as the worker, so that they can be distinguished only by their genitalia and the number of their antennal joints. In one species (*Anergates atratulus*) the apterous male degenerates still further into an almost pupoidal condition.

The facts briefly presented in the preceding paragraphs seem to me to have an important bearing on the question of continuous variation *versus* mutation in the production of organic forms. In most species of ants the constant and striking structural differences between the different castes would, at first sight, suggest that such forms as the apterous females, apterous males, soldiers and workers, must have arisen as so many saltatory variations, or mutants and that they survived and secured representation in the germ-plasm, because they happened to fulfill specialized and useful functions in the life of the colony. I believe, however, that this view of the castes, at least so far as their origin is concerned, cannot be maintained, because all the available evidence points to their being merely the surviving extremes of graduated and continuous series of forms, the annectant members of which have suffered phylogenetic suppression or extinction. This is most clearly seen in the case of the soldier and worker. Only within comparatively recent time, i.e., probably since the middle Tertiary, has the originally monomorphic worker caste become polymorphic in certain genera (*Camponotus*, *Atta*, *Pheidologeton*, some species of *Pheidole*), i.e., developed a complete series of workers ranging from huge-headed major workers or soldiers (macrergates, dinergates) through intermediates of various sizes (desmergates) to small workers (micrergates). There is much evidence to show that in some genera (e.g., *Pheidole*, *Oligomyrmex*, etc.) all the forms in this series, except the dinergates and micrergates, have been suppressed, so that a marked dimorphism of the worker caste, simulating an origin of one or both of the forms by mutation, has been produced. In other genera (*Carebara*, many *Solenopsis*) the soldier form has also been suppressed, so that the worker caste has again become monomorphic through the survival of nothing but the smallest forms (micrergates) of the originally graduated series. Finally, in certain parasitic ants, (*Anergates*, *Anergatides*, *Epœcus*, *Wheeleriella*, etc.) the last traces of the worker caste have vanished, just as in several Australian genera (*Leptomyrmex*, *Rhytidoponera*, *Diacamma*)[17] and the South African *Ocymyrmex*[18] the