

that which was evolved to accommodate the legs. With a return to a terrestrial environment it is natural to expect that the character most recently acquired should be the first to disappear. In the series of intermediate forms of *Pogonomyrmex* from queen to worker this is precisely what has happened. The appearance of functionless wings, the reduction in the size of the thorax due to the reduction in size of the wing muscles, and the simplification of the mesonotal region presents a stage in the evolution of the apterous forms from the winged forms. This progressive reduction in size of the thorax and wings, and the simplification of the pleural as well as the notal regions represents a recessive stage in the evolutionary series. The loss of vestigial wings and a progressive reduction in size represents a further step, and the true worker type marks the culmination of a long series of evolutionary stages from the winged to the apterous condition. Usually the intermediate forms have disappeared, and only the first and final stages are present, but occasionally abnormal forms such as these persist and give us a convenient series of connecting forms. Moreover, one is not compelled to formulate any hypotheses or construct any hypothetical figures as has been done in the case of the evolutionary stages from the wingless ancestors to the winged insects; here we have living examples of the connecting stages, a condition which is not usually met with in evolutionary study. The writer is very fortunate in having at his disposal these connecting links in most of the subfamilies of the ants. These series will be considered in a later and more comprehensive paper.

The wings of the queen and winged pseudogynes are illustrated in the textfigure. The wing of the queen is about 6 mm. in length and is much reduced in the distal region (Fig. a). The venation of the wing of the first pseudogyne is much reduced, especially in the anal and cubital region. The vestiges in forms similar to Fig. C consist of a small veinless wing sac. The grouping of the winged intermediate forms roughly in order of the development of vestiges by Shapley follows:

With minute veinless wing-sacs, or with stubs of broken wings—385.