

pseudogyne is characterized by an enlarged mesonotum and oftentimes by the presence of vestigial wings. It is more robust than the worker, and in the case of some forms retains the median ocellus which entirely disappears in the worker. However, a very complete series of intergrades may be noted, and in some cases a pseudogyne so nearly approximates a worker in size and in shape that a careful examination is necessary to differentiate between them. Pterergates and pseudogynes are easily distinguishable. In the case of a wingless pseudogyne and a pterergate, the distinction is obvious. In the case of a winged pseudogyne and a pterergate, the difference is one of size and structure of the thorax. Usually in winged pseudogynes the lower intergrades tend to lose their wings as they become reduced in size, so that the less developed individuals differ only in size from the worker and from the pterergates both in size and the absence of wings.

From the foregoing discussion of the polymorphic forms of the female ant, it may be noted that the distinctions between the forms are based mainly upon thoracic characters. The thorax of the female ants is as specialized as any that may be found among the winged insects, while the thorax of the worker ants is the most highly specialized, and at the same time as simplified as may be found among all insects. Adlerz has stated in his *Myrmecologiska Studier* that "we know that those characteristics that distinguish the typical worker from the queen are partly of a retrogressive nature; for example, the reduction of the receptaculum seminis, ovaries, eyes, wings, together with their muscles and muscular attachments, and partly progressive, for example, the increased size of mandibles and their muscles." The adoption of a terrestrial habit and the subsequent disappearance of wings has resulted in a fusion of sclerites in the thoracic region which makes a homological study almost impossible. Usually the dimorphic forms, the winged sexual forms and the wingless workers, are the only forms available for study, the intermediate forms having disappeared during phylogeny. Occasionally intermediate forms appear, giving convenient graduations from the winged to the wingless state, showing how the fusion of the sclerites and the simplification of the thorax may have taken place. In the