

In ventral view of *Formica* species the whole anterior face of the first tergite is evenly expanded ventrally, and extends onto the ventral surface. The median section, bearing the helcium, does not project further ventrally than do the portions on each side. The tergite and sternite meet ventrally in a distinct transverse fissure or suture which runs across the width *behind* the sternal plate of the helcium (Fig. 1). This fissure separates the helcium from the sternite proper and the tergo-sternal junction runs more or less transversely behind the helcium before curving posteriorly to run the length of the segment; the tergo-sternal junction does not intercept the helcium.

In ventral view of *Lasius*, on the other hand, the median portion of the anterior face of the first tergite, which bears the helcium, projects further ventrally than do the portions on each side (Fig. 2). In consequence the tergo-sternal junction on each side runs forward from the helcium, then passes through a narrow arc or sharp curve before running back down the length of the segment. Centrally the tergo-sternal junction intercepts the sides of the helcium and there is no transverse fissure separating the helcium from the sternite proper (Fig. 2).

This is a very distinctive character which shows hardly any variation within the genera; it also functions at genus-group level. The significance of these modifications is discussed below in the section dealing with the petiolar syndrome.

Petiolar syndrome/Gastral reflexing system (Figs 3–8). The petiolar syndrome is a complex of three congruent characters, involved in the articulation of the petiole with the alitrunk. These are: relative depth of the articulatory excavation of the petiole (Figs 3, 4), relative position of the hind coxae (Figs 5, 7), and cross section of the ventral part of the petiole (Figs 6, 8).

The articulatory excavation of the petiole. This is situated posteroventrally on the fused mesometathoracic sternite, between the hind coxal cavities. In *Formica*, the excavation does not reach a line spanning the anteriormost points of the metacoxal cavities (Fig. 3). In *Lasius* the excavation extends anteriorly far in front of this line (Fig. 4).

The relative position of the hind coxae. Seen in ventral view, the mesocoxae form a right angle to the midline and the hind coxae are oriented in a 135° angle. In both genera the mesocoxae are set close together. In *Formica* the hind coxae are also closely set, forming a V-shaped surface posteriorly (Fig. 5); in *Lasius* they are separated as wide apart as a petiole width and together with the mesocoxae they form a U-shaped cavity (Fig. 7). In consequence, the cross-section of the petiole in *Formica* is keeled (Fig. 6) whereas in *Lasius* it is rounded (Fig. 8), to accommodate the petiole against the metacoxae when the gaster is reflexed.