H.reginae, *dolichops*, *blandiens* and *balzani*). This form of petiole is not known in any tetramoriine species, and so must be considered autapomorphic in *Secostruma*.

The *Secostruma* shape of petiole also occurs convergently in some *Dilobocondyla*, a member of the *Podomyrma*-group. The possibility of *Secostruma* being related to *Dilobocondyla* is ruled out by the latter's failure to exhibit any of the *Tetramorium*-group or *Myrmica*-group characteristics exhibited by *Secostruma*, and by its possession of apomorphies not shown in either of these groups (for example, the presence of an isolated median clypeal seta, strongly swollen hind femora, sharply angulate or dentate occipital corners, loss of metasternal process).

18. The strange configuration of the gaster in *Secostruma* (Fig. 1) is autapomorphic. It is not duplicated anywhere else in the Myrmicinae, though massive expansion of the first tergite at the expense of the remaining gastral segments is known in a few unrelated genera (e.g. *Ankylomyrma*, *Cataulacus*, as mentioned in the discussion of *Secostruma*, above.)

On balance then, the characters and states exhibited by the holotype of *Secostruma lethifera* favour a tentative placement in the *Tetramorium*-group rather than in the *Myrmica*-group. Within the *Tetramorium*-group *Secostruma* is immediately isolated and identified by its autapomorphic characters in combination (characters 2, 11, 17, 18). Solid confirmation of this placement must await the discovery of further specimens so that the sting may be dissected and examined for the presence of the lamellar structure synapomorphic in tetramoriines. When discovered, the male of *S.lethifera* should possess an elongate fusion segment in the antennal funiculi, if this current placement of *Secostruma* among the tetramoriines is correct.

Assuming that the placement is correct, is there any species-group of *Tetramorium* which shares apparently apomorphic characters or states with *Secostruma*, and if so are the characters or states truly apomorphies or the results of convergence? Tentatively the answer must be that *T.elisabethae* of the *inglebyi*-group shares a number of characters with *S.lethifera*, but that these cannot be considered synapomorphies; they must be regarded as convergence phenomena.

In *T.elisabethae* workers (Bolton, 1977) the anterior clypeal margin has a median indentation, frontal carinae are very short and antennal scrobes are absent, the eyes are very small, propodeal spines are short, and metapleural lobes are broad and rounded. *T.elisabethae* belongs to a group of small (TL 2.8–3.1) depigmented species with reduced sculpture, all known species of which are restricted to the Indian subcontinent. Members of the group show all the characters just mentioned and also share a specialized and distinctively shaped base to the gaster, which is not seen in *Secostruma*. Only *elisabethae* of this group has rounded metapleural lobes, which must therefore be regarded as an autapomorphy of *elisabethae* within the *inglebyi*-group, and not as synapomorphic with *Secostruma*.

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