



New generic synonyms amongst Thysanoptera Phlaeothripinae listed from Europe and the Mediterranean area

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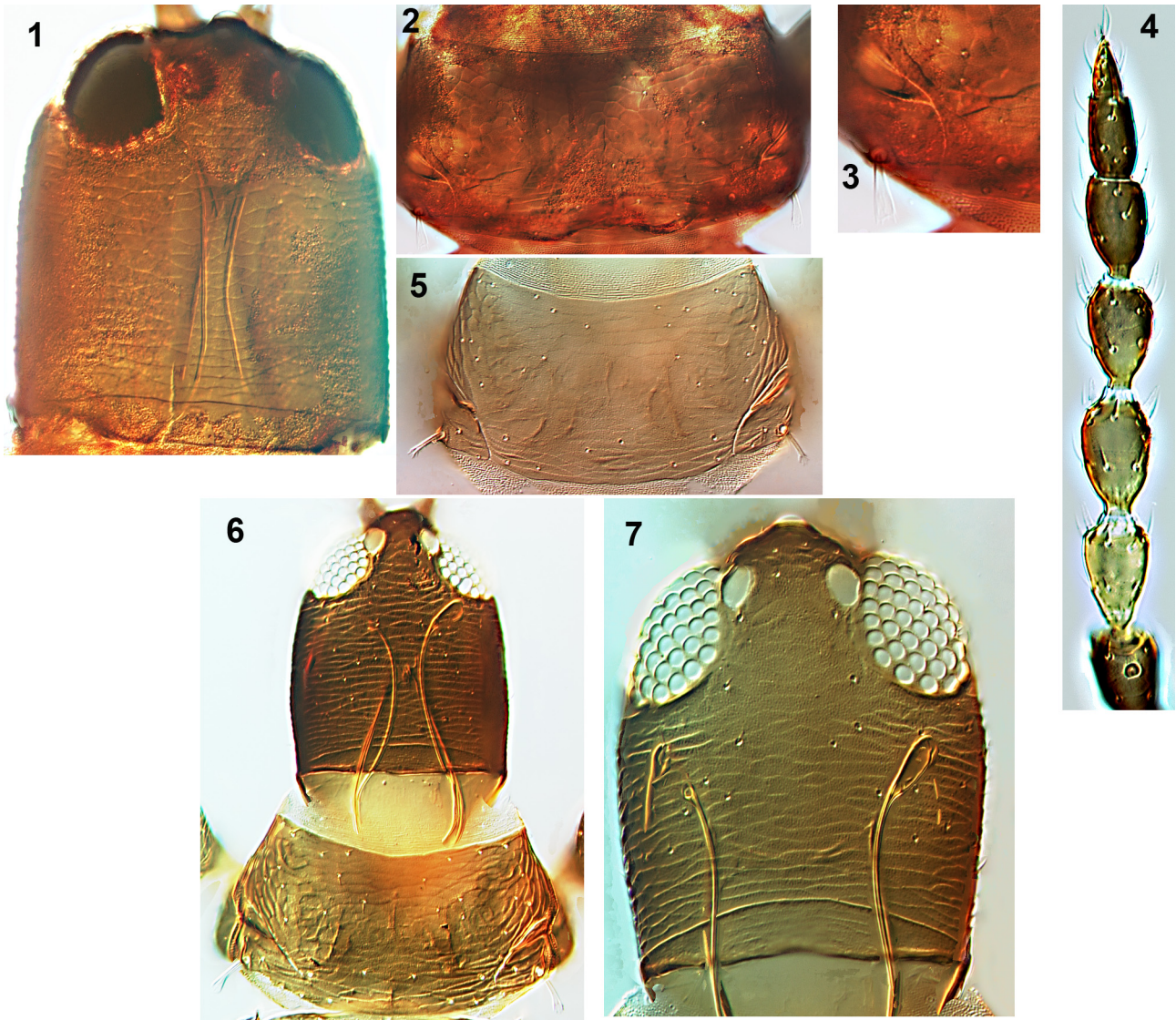
The generic classification of the Phlaeothripinae remains far from satisfactory. The available identification keys to the fauna of Europe are seriously out-of-date and involve limited consideration of phylogenetic relationships. In recent years, some progress has been attempted to understand relationships amongst the genera of this subfamily in other parts of the world, including China and southeast Asia (Dang *et al.* 2014) also Australia (Mound & Tree 2022). But for the European fauna there has been no consideration of the generic classification of this subfamily for more than half a century, since two monumental publications by Priesner (1964, 1965). Those two books, although issued in the 1960's, are based on opinions that were formulated many years before. They represent views from long before the work of Stannard (1957) that initiated ideas that led to more modern views on evolutionary relationships amongst Phlaeothripidae. The classification of the second subfamily of Phlaeothripidae, the Idolothripinae, was fully revised by Mound and Palmer (1983). In contrast, the genera and species of Phlaeothripinae listed from Europe in Fauna Europaea (2023) essentially reflect studies and opinions dating from the 1930's. The following notes are presented here to clarify some nomenclatural problems that have been encountered whilst attempting to prepare an information and identification system to the Phlaeothripidae genera of Europe. That system was intended to encompass all the genera of this family that are listed in the two volumes by Priesner from Europe and the Egyptian Deserts, bearing in mind that Priesner included Sudan in the latter volume. The objective here is to consider a few of the more difficult generic concepts involved, although some of the genera are not likely to occur on the European mainland.

Aulothrips Priesner

(Figs 1–4)

Aulothrips Priesner, 1950: 70. Type species *Aulothrips nubicus* Priesner 1950, by monotypy.

This genus was erected for a single species that remains known only from the original specimens collected at Gebel Elba on the south-eastern border between Egypt and Sudan. Despite this locality, which is on the northern edge of the Afro-tropical zone, the genus was included as a member of the Mediterranean fauna by Priesner (1965) and is therefore considered here. *Aulothrips* was distinguished from *Haplothrips* and other members of Haplothripini by the short postocular setae (Fig. 1) and the short, broadly expanded, hyaline pronotal posteroangular setae (Figs 2, 3), of which the latter were considered unique. However, both character states are shared by other species of *Haplothrips*. For example, in *Haplothrips (Trybomiella) timori* Mound & Minaei (2007) from northern Australia and Malaysia the pronotal setae are not quite as broadly expanded as those of *A. nubicus* (Figs 5, 6), but the postocular setae are similarly short, and the maxillary stylets of females are close together in the head (Fig. 6). The maxillary stylets of many *Haplothrips* species are widely spaced, often about one third of the head width apart. However, they are closer together in *H. ordi* Mound & Minaei, and scarcely one fifth of the head width apart in *H. salicorniae* Mound & Walker. The stylets in females of *nubicus* are even closer, but still with a clear maxillary bridge (Fig. 1). They are thus similar to the stylets of females of *H. timori* (Fig. 6), although the males of that species (Fig. 7) have the stylets wider apart (Dang & Mound 2023). Most other character states of *A. nubicus* are shared with various members of *Haplothrips*, including not only the short postocular setae but also the very slightly enlarged fore femora. As a result, *Aulothrips* Priesner is here considered a **new synonym** of the worldwide genus *Haplothrips* Amyot & Serville, with the new combination *Haplothrips nubicus* (Priesner) **comb.n.**



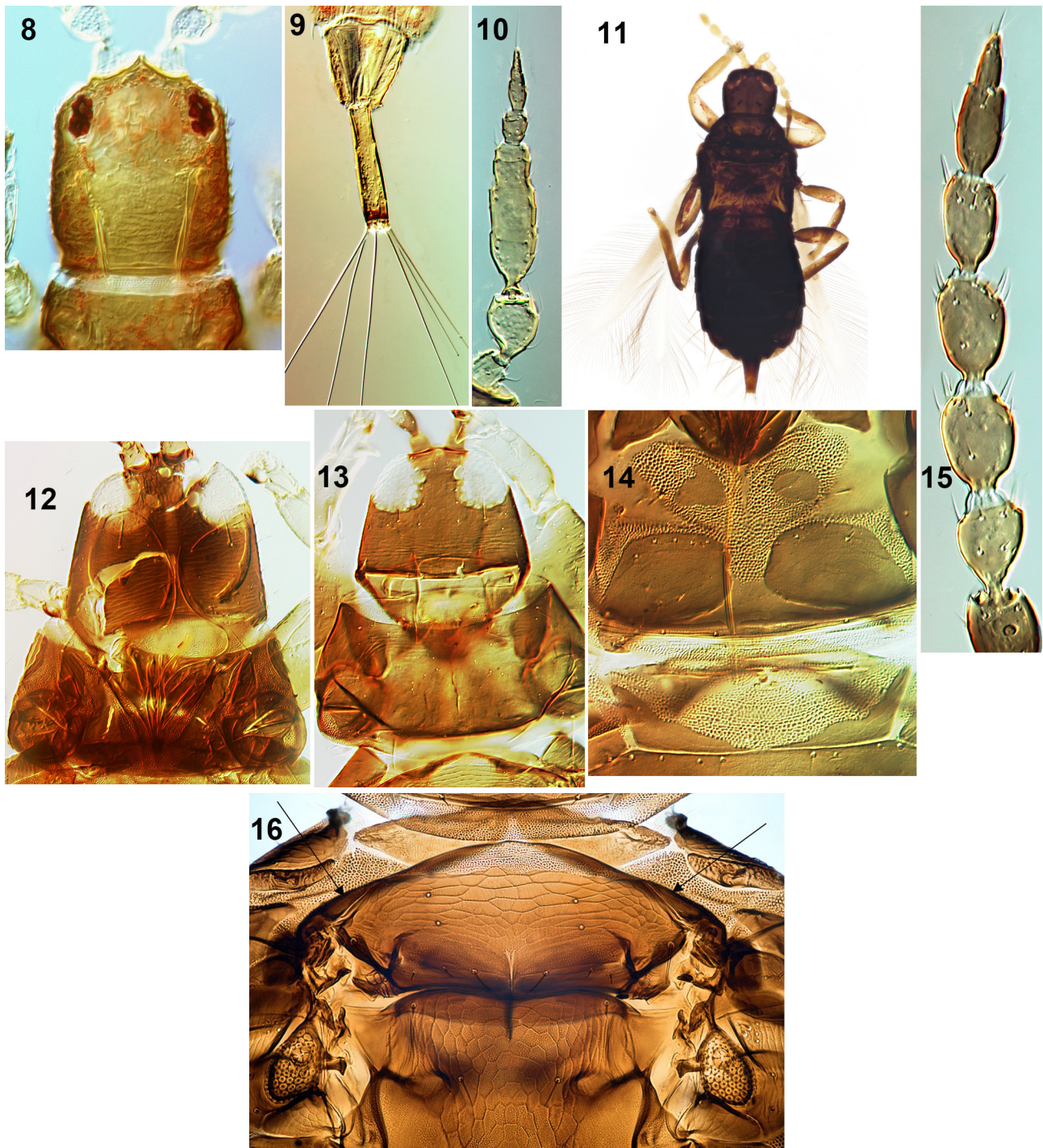
FIGURES 1–7. European problem genera. *Aulothrips* syntyte female 1–4: (1) head; (2) pronotum; (3) epimeral seta; (4) antenna. *Haplothrips timori* 5–7: (5) pronotum; (6) female head and pronotum; (7) male head.

***Bebelothrips* Buffa**

(Figs 8–10)

Bebelothrips Buffa, 1909: 195. Type species *Bebelothrips latus* Buffa 1909, by monotypy.

The small paper published in 1909 by Buffa comprised descriptions of two genera, *Amphibolothrips* and *Bebelothrips*, each to include a single new species. These species were both wingless, the first being based on a single female that had been collected near Rome, and the second based on three females taken on the island of Giglio in the Tuscan Archipelago about 130km northwest of Rome. These genera were subsequently recognised as members of the urothripine group of Phlaeothripinae, and they have been variously treated by several authors. Stannard (1952) placed *Bebelothrips* as a subgenus of *Amphibolothrips*, together with the six other urothripine genera available at that time. However, in 1970 Stannard reversed this opinion and recognised 17 urothripine genera as valid. Priesner (1964), in identification keys to the European Thysanoptera fauna, distinguished *Bebelothrips* from *Amphibolothrips* based on the different number of visible antennal segments, and these two genera remain listed separately in Fauna Europaea (2023). However, the generic classification of the urothripines was revised recently (Mound *et al.* 2023) and distinguishing these two as separate genera was not accepted due to variation in antennal structure amongst several other urothripines. These authors therefore placed *Bebelothrips* as a new synonym of *Amphibolothrips*, resulting in that genus now comprising four species (ThripsWiki 2023).



FIGURES 8–16. European problem genera. *Bebelothrips flavicinctus* 8–10: (8) head; (9) tergites IX–X; (10) antenna. (11) *Brachythrips flavicornis* holotype. (12) *Brachythrips dirghavadana* head and pronotum. *Euryaplothrips crassus* 13–15: (13) head and pronotum; (14) prosternites; (15) antenna. (16) *Haplothrips angusticornis* meso & metanota – arrows indicate tegula.

***Brachythrips* Reuter**

(Fig. 11)

Brachythrips Reuter, 1899: 28. Type species *Brachythrips flavicornis* Reuter, by monotypy.

This genus was erected by Reuter (1899) for a single species that was known only from a single dry carded specimen found near Turku on the western coast of Finland. Turku is the old capital of Finland and was a major shipping port in the 1800's with trading connections across the Atlantic. No further specimens of this species have ever been found, despite several workers over many years being interested in the Thysanoptera of Scandinavia. There is thus no evidence that this thrips

is a member of the European fauna, and the single specimen of *flavicornis* seems likely to have been imported on sailing ships, possibly from North America. Priesner (1930) arranged for the carded specimen of *flavicornis* to be slide mounted in Canada balsam so that he could redescribe it, and that slide was deposited in the Finnish Natural History Museum. In providing a new description of this specimen Priesner did not state anything about the number of antennal sense cones, but he also wrote that “man kann also sagen” that *Brachythrips flavicornis* is a species of *Liothrips*. The head of the specimen is short and *Rhynchothrips*-like (Fig. 11), as in *Liothrips pruni* from northeastern America and *Liothrips gaviotae* from California. There seems no reason to dispute Priesner’s tentative opinion, and *Brachythrips* Reuter is therefore considered a **new synonym** of the genus *Liothrips* Uzel, with *Liothrips flavicornis* (Reuter) as a **new combination**.

The generic relationships of *Brachythrips dirghavadana* Ramakrishna from India, the only other species listed under the name *Brachythrips*, are not clear. Ananthakrishnan and Sen (1980) suggest in a key to genera of Phlaeothripidae that this species should be placed in a new but un-named genus. Certainly the elongate and curved maxillary stylets of the species are unusual (Fig. 12), but in the absence of further specimens from India *Liothrips dirghavadana* (Ramakrishna) is here considered a **new combination**.

***Euryaplothrips* Ramakrishna & Margabandhu**

(Figs 13–15)

Euryaplothrips Ramakrishna & Margabandhu, 1931: 1037. Type species *Euryaplothrips crassus* Ramakrishna & Margabandhu, by monotypy.

The single species placed in this genus was described from Coimbatore in southern India, taken in the flowering heads of a species of *Amaranthus*. The original authors distinguished this genus from *Haplothrips* (*Trybomiella*) by the head being broader than long, a condition that is emphasised by the older slide-mounted specimens being contracted and slightly crushed (Fig. 13). Subsequently, Priesner (1965) further distinguished the genus because the outer apex of the fore femora is “somewhat reflexed and carinate”. Neither of these character states provides a robust generic distinction. The head of the holotype of *Haplothrips gomphrenae* Mound & Minaei (2007) from northern Australia is no longer than wide, although in many of the paratypes the head is clearly longer than wide. The fore femoral apex in this species is also thickened, protruding slightly on the external margin, and the host plant is also a member of the Amaranthaceae. There are specimens of *Euryaplothrips crassus* in the Senckenberg Museum from Yemen, Ethiopia and the Cape Verde islands, and in the Natural History Museum, London, there are specimens of this species from plants of *Aerva* (Amaranthaceae) in India (Coimbatore & Madras), Pakistan (near Peshawar), Sudan (Wad Medani) and Egypt (Kom Ombo). Most of the available specimens are dark and uncleaned, but in one female from *Aerva* at Madras the basantra are visible (Fig. 14). Kaomud Tyagi of Kolkata, India kindly confirmed the presence of the following character states on more recent specimens that are available to her: prosternal basantra present; metathoracic sternopleural sutures absent. These two conditions are typical of members of the genus *Haplothrips*. Since no other character states have been found to distinguish this genus, *Euryaplothrips* is here considered a **new synonym** of the genus *Haplothrips* Amyot & Serville. The species *Haplothrips crassus* (Ramakrishna & Margabandhu) **comb.n.** is thus interpreted as a rather large but short-headed species of the *Haplothrips* (*Trybomiella*) species group.

***Hapedothrips* Bhatti**

(Fig. 16)

Hapedothrips Bhatti, 1995: 105. Type species *Haplothrips trifolii angusticornis* Priesner 1921, by monotypy.

This genus was erected by Bhatti for a single species from Europe, *Haplothrips angusticornis* Priesner. That author stated that the new genus was distinct from *Haplothrips* on the following character states; the short postocular setae that are “not distinguishable from other head setae”, and “the tegula continuous with the mesoprescutum on either side”. However, as discussed above for *Aulothrips*, the postocular setae of several species of *Haplothrips* are short, shorter than the length of an ocellus, although in other species they may be longer than the eye length. The condition in *H. angusticornis* is thus not exceptional. Unfortunately, Bhatti did not provide any illustration of the tegula condition, the second character state difference that he mentioned. No difference has been seen in these structures between *H. angusticornis* (Fig. 16) and other *Haplothrips* species deposited in the collections in London and in Frankfurt. In view of this, *Hapedothrips* Bhatti is here considered a **new synonym** of *Haplothrips* Amyot & Serville.

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