

First Record of the Genus *Phlaeothrips* (Thysanoptera: Phlaeothripidae) from Türkiye, with Notes on *Phlaeothrips coriaceus* (Haliday, 1836)

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ABSTRACT

The genus *Phlaeothrips* Haliday, 1836 (Phlaeothripidae: Phlaeothripinae) is reported from Türkiye for the first time, based on specimens of *Phlaeothrips coriaceus* (Haliday, 1836) collected in Balıkesir Province. This record confirms the presence of the genus and the species in the country and provides additional faunistic data on Thysanoptera from Türkiye. Specimens were collected using window traps placed on *Quercus* and *Fagus* trees in deciduous forest habitats. A detailed redescription of *P. coriaceus* is presented, supported by morphometric data and photomicrographs. These findings add complementary faunistic and morphological information on Thysanoptera in Türkiye.

Keywords: Fungus-feeding thrips, Tubulifera, new record, Türkiye.

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INTRODUCTION

The suborder Tubulifera currently includes a single extant family, the Phlaeothripidae, which is taxonomically divided into two subfamilies (ThripsWiki, 2023). Within the subfamily Phlaeothripinae, approximately 3,075 species are described under 375 genera worldwide (Okajima & Masumoto, 2024). In contrast, the subfamily Idolothripinae encompasses 735 species classified under 83 genera, reflecting notable taxonomic diversity within both lineages.

The genus *Phlaeothrips* Haliday, 1836 currently includes 23 listed species (ThripsWiki, 2023), although several of these were described over a century ago and are now unrecognisable and potentially not congeneric. Among these, nine species are recorded from the Euro-Mediterranean region, for which Priesner (1964) provides the only available identification key.

Research on the Thysanoptera fauna of Türkiye has expanded in recent years (Şahin & Tezcan 2014; Çinkul, Atakan, & Varlı, 2021; Saygı, Çinkul, & Tezcan, 2025). To date, ten genera of Phlaeothripinae have been recorded from the country: *Acanthothrips*, *Apterygothrips*, *Cephalothrips*, *Gynaikothrips*, *Haplothrips*, *Hoplandrothrips*, *Karnyothrips*, *Liothrips*, *Neoheegeria*, and *Sinuothrips* (Pelikan, 1969; Tunç & Hastenpflug-Vesmanis, 2016). However, species of Phlaeothripinae remain poorly known and require further detailed study.

In the present study, the genus *Phlaeothrips* is reported from Türkiye for the first time. This record confirms the occurrence of *P. coriaceus* in Türkiye and provides additional faunistic information on fungus-feeding thrips in the region.

The objective of this study is to provide a detailed description of *P. coriaceus* (genus *Phlaeothrips*), based on specimens collected using window traps mounted on aged *Quercus* and *Fagus* trees in several localities of Balıkesir Province, Türkiye. This record confirms the occurrence of the genus *Phlaeothrips* in Türkiye and provides additional faunistic information on its distribution in deciduous forest habitats of the region.

MATERIAL AND METHODS

The specimens were collected in 2011 and 2013 from distinct localities in Balıkesir Province, Türkiye, using window traps mounted on aged *Quercus* and *Fagus* trees. The tree species on which the traps were installed included *Quercus frainetto* Ten., *Quercus petraea* Liebl., and *Fagus orientalis* Lipsky. Each trap consisted of a transparent plastic panel (30 × 60 cm) with a collecting tray attached below (Fig. 1). The traps were mounted on the trunks of oak and beech trees at a height between 1.5 and 2.5 meters above ground level. The trays were filled with a 1:1 mixture of ethylene glycol and water, to which a small amount of detergent was added to reduce surface tension.

After transport to the laboratory, samples were rinsed with water using a wire sieve with a 0.1 mm mesh size to remove residual trap fluid. Specimens were then transferred into 2 ml Eppendorf tubes containing AGA preservation fluid (a mixture of 10 parts 60% ethyl alcohol, 1 part glycerin, and 1 part acetic acid) (Mound & Kibby,

1998). Preliminary examination and identification were conducted under a stereo microscope, after which the specimens were preserved in 60% ethyl alcohol.

For slide preparation, selected specimens were mounted in Canada balsam on microscope slides. The prepared slides were examined and photographed using a compound microscope equipped with a digital camera, and Olympus SC50 digital imaging system.

All slide-mounted voucher specimens are deposited in the collection of the Zoological Museum, Department of Biology, Faculty of Arts and Sciences, Balıkesir University.



Figure 1. Window trap used in the study.

RESULTS

Family Phlaeothripidae Uzel, 1895

Subfamily Phlaeothripinae Uzel, 1895

Genus *Phlaeothrips* Haliday, 1836

Phlaeothrips coriaceus Haliday, 1836

Material examined: Türkiye, Balıkesir, Gönen, 406 m, *Q. frainetto*, 40.14833°N, 27.49306°E, 26.07.2013, leg. A. Tüven, 2♀ 2♂; Susurluk, 570 m, *Q. petraea*, 39.8684°N, 28.2764°E, 23.07.2011, leg. A. Tüven, 1♂; Gönen, 730 m, *F. orientalis*, 40.1270°N, 27.4289°E, 21.08.2013, leg. A. Tüven, 1♀; Erdek, 601 m, *F. orientalis*, 40.4625°N, 27.8236°E, 21.07.2013, leg. A. Tüven, 1♀; Erdek, 601 m, *F. orientalis*, 40.4625°N, 27.8236°E, 24.05.2013, leg. A. Tüven, 2♀; Bigadiç, 1612 m, *F. orientalis*, 39.3239°N, 27.3947°E, 27.06.2013, leg. A. Tüven, 3♂; Susurluk, 794 m, *F. orientalis*, 39.8614°N, 28.3036°E, 23.07.2013, leg. A. Tüven, 1♂; Susurluk, 794 m, 39.8614°N, 28.3036°E, 16.08.2013, leg. A. Tüven, 1♂. All specimens were collected using window traps placed in deciduous forest habitats.

Diagnosis: Female macroptera. Body dark brown. Head longer than wide, sometimes elongate; cheeks weakly rounded, bearing several setae, often arising from small warts or tubercles. Antennal segments III clay-coloured; IV yellow only in basal half, otherwise diffusely shaded; V and VI yellow at base, otherwise dark. Forewings slightly yellowish, with a grey spot before middle.

Head. Head longer than wide (Fig. 2a). Antennae 8-segmented; segment VIII spindle-shaped. Antennal segment III three times as long as wide, nearly 1.2 times

the combined length of segments I and II; bearing 3 sense cones, IV with 4 sense cones (Fig. 2b). Postocular setae bluntly capitate, arising lateral to mid-point of eye; maxillary stylets retracted to level of eyes, close together medially.

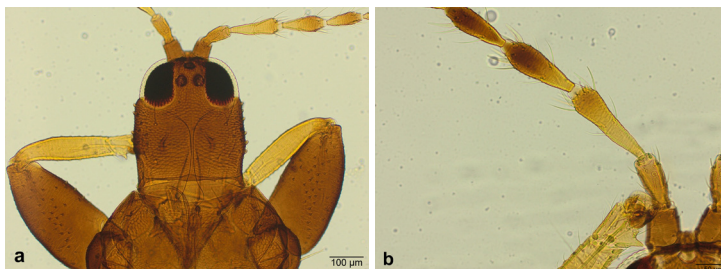


Figure 2. *Phlaeothrips coriaceus* ♀, a) head, b) antennal segments III–IV.

Thorax. Pronotum reticulate laterally, with sculpture weak or absent medially; five pairs of major setae present, weakly capitate. Prosternal basantra absent; mesopresternum composed of three separate sclerites (Fig. 3a); metathoracic sternopleural sutures long. Fore wings parallel sided, with more than 30 duplicated cilia (Fig. 3b); slightly yellowish with grey spot before middle, sub-basal setae S3 finely acute, S1 and S2 capitate (Fig. 3c).

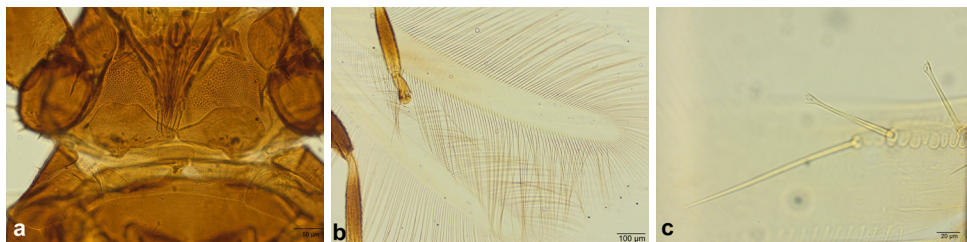


Figure 3. *Phlaeothrips coriaceus* ♀, a) mesopresternum, b) forewing, c) sub-basal wing setae.

Abdomen. Pelta triangular and reticulate, with sinuate lateral margins (Fig. 4a). Tergites II–VII each with two pairs of slender, sigmoid wing-retaining setae (Fig. 4b). Setae S1 on tergite IX measure 122 µm, representing approximately 35% of the tube length, and are thus distinctly shorter than half the tube (Fig. 4c).

Male macroptera. Male scarcely smaller than female; tergite IX setae S2 stout and blunt; sternite VIII without pore plate (Fig. 4d).

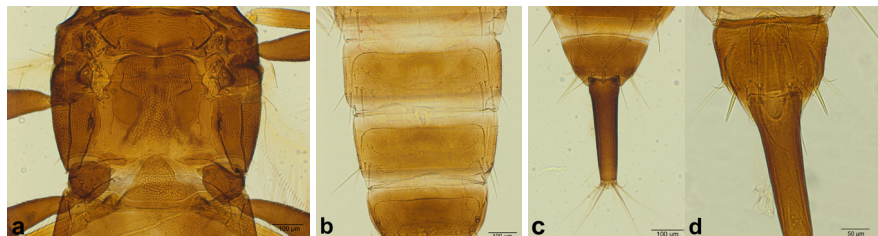


Figure 4. *Phlaeothrips coriaceus* ♀; a) pelta, b) sigmoid wing-retaining setae, c) tube; d) ♂, tergite IX.

DISCUSSION

This study confirms the presence of *P. coriaceus* in Türkiye. Although this species is widely distributed worldwide (Mirab-balou, 2018; Mound et al., 2018; zur Strassen, 2003), its occurrence in Türkiye had not been previously documented. The discovery underscores the importance of faunistic surveys in poorly studied regions, particularly in habitats dominated by oak and beech forests.

All specimens were collected using window traps placed in deciduous forests dominated by *Quercus* and *Fagus* species. The abundance of decaying wood in these forests suggests that such habitats provide suitable conditions for the occurrence of *P. coriaceus*. However, members of the genus *Phlaeothrips* are known to breed on dead branches and trunks of various angiosperm trees, feeding on fungal hyphae or their breakdown products (Mound et al., 1976). The presence of abundant decaying wood in the collection sites suggests that similar habitats may also support this species, consistent with its saprophytic habits reported in previous studies.

The specimens examined in this study correspond well with the diagnostic features previously described for *P. coriaceus* by Priesner (1964). These morphological characters support the identification of the material examined, consistent with earlier descriptions.

In summary, this study confirms the presence of *P. coriaceus* in Türkiye and provides a foundation for future studies on the Thysanoptera fauna of the region.

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Conflict of interest

All authors have declared that there is no conflict of interest regarding publication of this article.

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