



Short Communication

Rubiothrips Schliephake, a newly recorded genus of Thripinae from China (Thysanoptera: Thripidae)

Majid Mirab-balou

Department of Plant Protection, College of Agriculture, Ilam University, Ilam, Iran

Abstract. *Rubiothrips vitis* (Priesner) of the subfamily Thripinae (Thysanoptera: Thripidae) collected from Sichuan Province is reported in this paper, which represents the first record of both the genus and the species from China.

Keywords: Thysanoptera, *Anaphothrips* genus-group, Sichuan, China

Article history

Received: 13 June 2024
Accepted: 21 August 2024
Published: 22 January 2025

Subject Editor: Shahab Manzari

Corresponding author: Majid Mirab-balou

E-mail: m.mirabbalou@ilam.ac.ir

DOI: <https://doi.org/10.61186/jesi.45.1.11>

Thysanoptera is one of the orders of insects distributed through all parts of the world. After the last checklist of thrips of China (Mirab-balou *et al.*, 2011), the 28 following genera were added to Thripinae: *Ajothrips* Bhatti, *Amalothrips* Ananthakrishnan, *Amomothrips* Bhatti, *Apterothrips* Bagnall, *Aroidothrips* Ananthakrishnan, *Baliothrips* Uzel, *Bilothrips* Bhatti, *Caprithrips* Faure, *Cricothrips* Trybom, *Dictyothrips* Uzel, *Firmothrips* Schliephake, *Indusiothrips* Priesner, *Iridothrips* Priesner, *Isunidothrips* Kudo, *Laplothrips* Bhatti, *Limothrips* Haliday, *Moundinothrips* Bhatti, *Organothrips* Hood, *Paithrips* Nonaka & Jangvitaya, *Parexothrips* Priesner, *Pseudoxothrips* Priesner, *Rhaphidothrips* Uzel, *Siamothrips* Okajima, *Smilothrips* Bhatti, *Striathrips* Mound, *Tameothrips* Bhatti, *Tenothrips* Bhatti, and *Trachynotothrips* Masumoto & Okajima (Hu & Feng, 2011, 2013; Li *et al.*, 2017, 2018a,b, 2019, 2021; Mirab-balou *et al.*, 2012a,b, 2013, 2014a,b; Ntirenganya *et al.*, 2021; Tong *et al.*, 2015; Wang & Tong, 2016; Wang *et al.*, 2016; Xie *et al.*, 2016; Zhang *et al.*, 2018); and four genera i.e. *Chilothrips* Hood, *Graminothrips* Zhang & Tong, *Javathrips* Bhatti and *Yaothrips* Mirab-balou et Chen were synonymized with other taxa (Mirab-balou *et al.*, 2015; Tong & Liu, 2019; Zhang *et al.*, 2018).

With the time of mentioned study, a few damaged specimens of an unidentified species of *Rubiothrips* Schliephake have already been studied from Ningxia Province, China. Here, a member of the genus *Rubiothrips* that was collected from Sichuan Province is newly recorded from China. The genus *Rubiothrips* was erected by Schliephake (1975) with *Anaphothrips ferruginea* Uzel 1895 as a type species. This genus by having 10 species in the world (ThripsWiki, 2024) belongs to *Anaphothrips* genus-group (Mound & Masumoto, 2009). Specimens were collected from Sichuan Province, China. Thrips were prepared on slides following Mirab-balou & Chen (2010). The specimens are deposited in the collection of Department of Plant Protection, College of Agriculture, Ilam University, Iran (ILAMU).

Rubiothrips Schliephake

Rubiothrips Schliephake, 1975: 11. Type species *Anaphothrips ferruginea* Uzel, 1895.

This genus includes 10 species in the world, nine of them from Europe and Iran (Mirab-balou & Chen, 2013) and one species from Japan (Masumoto & Okajima, 2017). The genus *Rubiothrips* is recorded here for the first time from China.

The full generic diagnosis is available in zur Strassen (2003), Mirab-balou & Chen (2013) and Masumoto & Okajima (2017).

Rubiothrips vitis (Priesner, 1933)

Anaphothrips vitis Priesner, 1933: 79.

Diagnosis



Female macroptera (**Fig. 1A**). Body mainly yellow with median brown spots pattern on tergites I–VII limited to medial third of tergite surface; antennal segment I as color as head, II brownish yellow, base of segments III–V paler, VI–VIII dark brown (**Fig. 1B**); fore wings faintly shaded.

Head with 3 pairs of small ocellar setae, pair III arising between posterior margins of hind ocelli (**Fig. 1C**); postocular setae small. Antennae 8-segmented, with forked sense cones on antennal segments III and IV. Pronotum with no long setae. Mesothoracic furca with spinula, but absent on metasternum (**Fig. 1D**); metanotum with weakly reticulate sculpture, median setae short and arising well behind anterior margin, a pair of campaniform sensilla present (**Fig. 1E**). Fore wing veinal setae small, first vein with 3 distal setae, second vein with about 10 setae. Abdominal tergites II–VIII with pair of long setae medially (S1) close together, setae S3 situated at posterior margin of sclrite (**Fig. 1G**); median area of tergites with transverse lines of sculpture, laterally these lines with minute microtrichia; abdominal sternites without discal setae, with three pairs of setae all at posterior margin (**Fig. 1F**).

Material examined. CHINA, Sichuan province: 2♀, around rice fields, on unknown plant ??, 10.vii.2010, Leg. De-Qiang PU.

Distribution

Iran, Romania, Türkiye, Palestine, Hungary, Romania, Bulgaria, Greece (Mirab-balou, 2018) and China (new record to China, this study).

Remarks

With this new record, the subfamily Thripinae with 79 genera is the most species-rich thrips group in China. According to zur Strassen (2003), *R. vitis* can be distinguished from *R. sordidus* (Uzel) by small spot area on abdominal tergites (vs. median brown spots pattern on tergites covering at least half of tergite surface in *sordidus*) and posterior margin of head as pale as remainder of head (vs. posterior margin of head brown-lined in *sordidus*). According to Moritz *et al.* (2001), *R. vitis* has no campaniform sensilla on the metascutum, but among Iranian specimens, this character is variable (Mirab-balou & Chen, 2013).

Author's Contributions

The author confirms sole responsibility for the following: conceptualization, methodology, investigation, draft preparation, final review and edit, visualization, supervision, project administration and funding acquisition.

Author's Information

Majid Mirab-balou

 m.mirabbalou@ilam.ac.ir

 <https://orcid.org/0000-0003-3536-1511>

Funding

This work received no specific grant from any funding agency in the public, commercial, or not-for-profit sections.

Data Availability Statement

The specimens examined in this study are deposited in the collection of Department of Plant Protection, College of Agriculture, Ilam University, Iran (ILAMU), and are available by the curator upon request.

Acknowledgments

I am grateful to my doctoral classmate at Zhejiang University (2008–2012), Dr. De-Qiang PU, who collected thrips specimens when he worked on flower-visiting insects and their potential impact on transgene flow in rice. He collected many insects in the main rice cultivating regions in China.

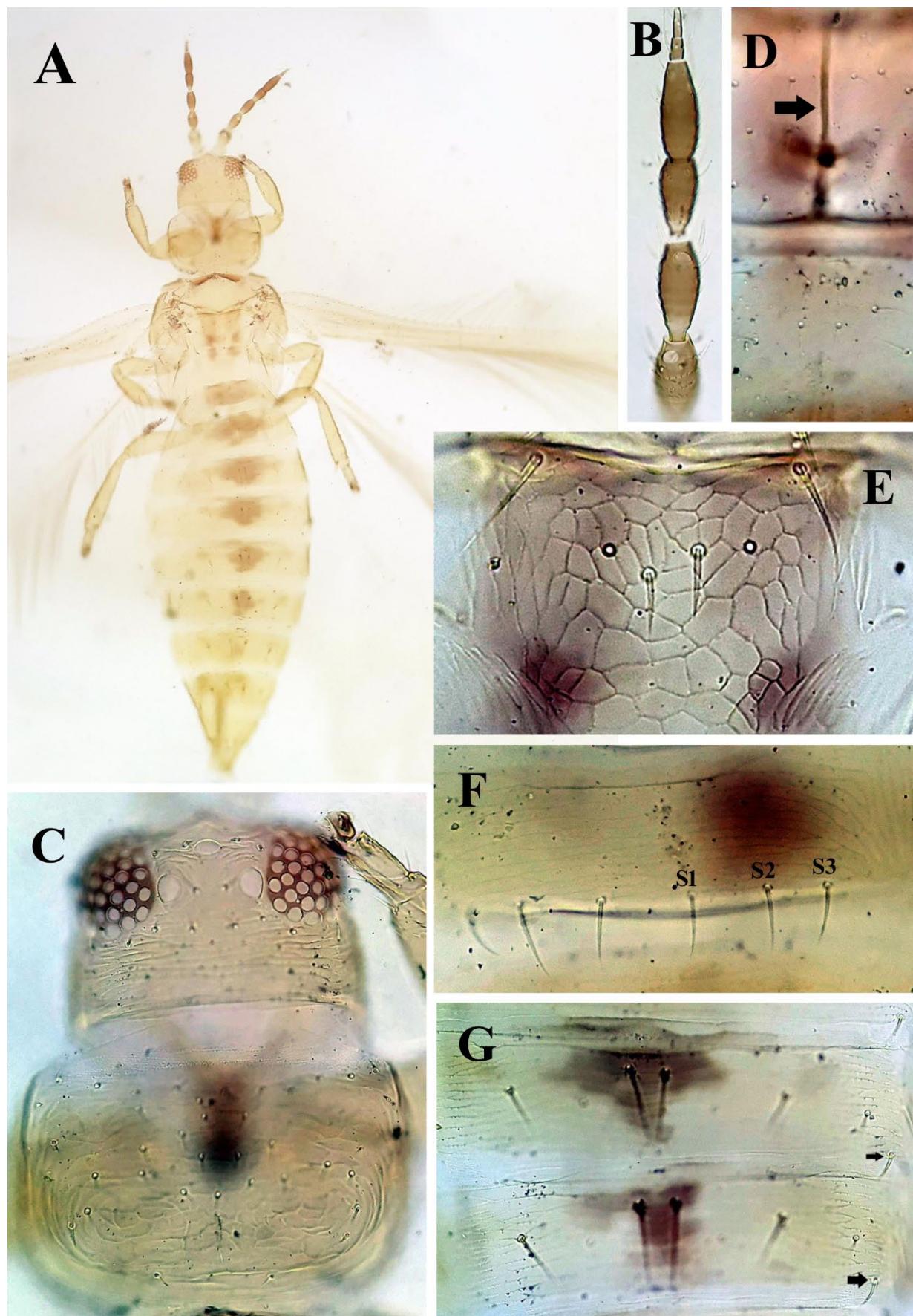


Fig. 1. *Rubiothrips vitis*, **A.** female, general habitus; **B.** Antenna; **C.** Head and pronotum; **D.** Spinula on mesosternum; **E.** Metanotum; **F.** Abdominal sternite VI, showing setae S3 on posterior margin; **G.** Abdominal tergites IV & V, showing setae S3 on posterior margin.

Ethics Approval

Insects were used in this study. All applicable international, national, and institutional guidelines for the care and use of animals were followed. This article does not contain any studies with human participants performed by the author.

Conflict of Interest

No conflict of interest.

REFERENCES

- Hu, Q. L. & Feng, J. N. (2011) Two newly recorded genera of the subfamily Thripidae Stephens from China with revision of genus *Apterothrips* Bagnall. *Acta Zootaxonomica Sinica* 36, 865–870.
- Hu, Q. L. & Feng, J. N. (2013) A newly recorded genus *Rhaphidothrips* Uzel in China and its only species (Thysanoptera: Thripidae). *Acta Zootaxonomica Sinica* 38, 432–435.
- Li, Y. Y., Li, Z. Y. & Zhang, H. R. (2017) One Genus and Two Species of Thripinae Newly Recorded from China (Thysanoptera: Thripidae). *Annals of Biological Sciences* 5, 54–57.
- Li, Y. J., Xie, Y. H., Zhang, H. R. & Li, Z. Y. (2018a) *Amomothrips* Bhatti, a newly recorded genus of Thripinae from China (Thysanoptera: Thripidae). *Zoological Systematics* 43, 211–214. DOI: 10.11865/zs.201819
- Li, Y. J., Xie, Y. H., Zhang, H. R. & Li, Z. Y. (2018b) A newly recorded genus of *Anaphothrips* genus-group from China. *Journal of Yunnan Agricultural University (Natural Science)* 33, 371–375.
- Li, Y. J., Li, Z. Y. & Zhang, H. R. (2019) *Trichromothrips* genus-group (Thysanoptera, Thripidae) from China, with descriptions of three new species and ten new records. *Zootaxa* 4544, 079–092. <https://doi.org/10.11646/zootaxa.4544.1.3>
- Li, Y. J., Liu, Z. & Zhang, H. (2021) *Rhamphothrips* genus-group in China, with description of two new species and two new records (Thysanoptera: Thripidae). *Zootaxa* 5039, 425–432. <https://doi.org/10.11646/zootaxa.5039.3.7>
- Masumoto, M. & Okajima, S. (2017) Anaphothrips genus-group: key to world genera, with two new species and three new records from Japan (Thysanoptera, Thripidae). *Zootaxa* 4272(2), 201–220. <https://doi.org/10.11646/zootaxa.4272.2.3>
- Mirab-balou, M. & Chen, X. X. (2010) A new method for preparing and mounting thrips for microscopic examination. *Journal of Environmental Entomology* 32(1), 115–121.
- Mirab-balou, M. & Chen, X. (2013) New records and two new species of the *Anaphothrips* genus-group in Iran (Insecta, Thripidae). *Acta Zoologica Bulgarica* 6 (2), 159–164.
- Mirab-balou, M. (2018) An updated checklist of Iranian thrips (Insecta: Thysanoptera). *Far Eastern Entomologist* 361, 12–36.
- Mirab-balou, M., Tong, X. L., Feng, J. N. & Chen, X. X. (2011) Thrips (Insecta: Thysanoptera) of China. *Check List* 7, 720–744.
- Mirab-balou, M., Chen, X. X. & Tong, X. L. (2012a) *Tenothrips* Bhatti, a newly recorded genus of Thripinae (Thysanoptera: Thripidae) from China. *Entomotaxonomia* 34, 162–166.
- Mirab-balou, M., Wei, S. J., Lu, H. & Chen, X. X. (2012b) Description of a new grass-living species of the genus *Yoshinothrips* Kudo, and a newly recorded genus of Thripinae for China (Thysanoptera: Thripidae). *Acta Zootaxonomica Sinica* 37, 345–349.
- Mirab-balou, M., Yang, S. L. & Tong, X. L. (2013) A newly recorded genus *Smilothrips* Bhatti (Thysanoptera: Thripidae) in China. *Entomotaxonomia* 35, 179–184.
- Mirab-balou, M., Yang, S. L., Gao, J. Q. & Tong, X. L. (2014a) A newly recorded genus of the *Rhamphothrips* genus-group (Thysanoptera: Thripidae) from China. *Zoological Systematics* 39, 583–587.
- Mirab-balou, M., Yang, S. L. & Tong, X. L. (2014b) The *Frankliniella* genus-group (Thysanoptera: Thripidae) in China, with a newly-recorded genus. *Entomotaxonomia* 36, 97–104.
- Mirab-balou, M., Mound, L. A. & Tong, X. L. (2015) New combinations and a new generic synonym in the genus *Taeniothrips* (Thysanoptera: Thripidae). *Zootaxa* 3964, 371–378.
- Moritz, G., Morris, D. C. & Mound, L. A. (2001) Thrips ID. Pest thrips of the world. An interactive identification and information system. – CD-ROM published by ACIAR, Australia.
- Mound, L. A. & Masumoto, M. (2009) Australian Thripinae of the *Anaphothrips* genus-group (Thysanoptera), with three new genera and thirty-three new species. *Zootaxa* 2042, 1–76.
- Ntirenganya, E., Li, Y. J., Xie, Y. L., Zhou, Y. L. & Zhang, H. R. (2021) Checklist of the suborder Terebrantia (Thysanoptera): generic diversity and species composition in Xishuangbanna, Yunnan Province, China. *Biodiversity Data Journal* 9, e72670. <https://doi.org/10.3897/BDJ.9.e72670>
- Tong, X. L., Wang, Z. H. & Zhao, C. (2015) Remarkable sexually dimorphic *Aroidothrips longistylus* newly recorded from China (Thysanoptera: Thripidae). *Zootaxa* 4028, 148–150. <http://dx.doi.org/10.11646/zootaxa.4028.1.9>
- Tong, X. L. & Liu, L. X. (2019) *Yaothrips* as a new synonym of *Pezothrips*, with description of the male of *Pezothrips pediculae* comb.n. (Thysanoptera: Thripidae). *Zootaxa* 4646, 598–600. <https://doi.org/10.11646/zootaxa.4646.3.12>

- Wang, Z. H. & Tong, X. L. (2016) *Siamothrips balteus*, a new species of *Scirtothrips* genus-group from China (Thysanoptera, Thripidae). *ZooKeys* 637, 129–133. <https://doi.org/10.3897/zookeys.637.10910>
- Wang, Z. H., Zhao, C., Chen, J. Y. & Tong, X. L. (2016) Two newly recorded genera and a new species of Thripinae from China (Thysanoptera: Thripidae). *Zoological Systematics* 41, 253–260. DOI: [10.11865/zs.201626](https://doi.org/10.11865/zs.201626)
- Xie, Y. H., Li, Y. J. & Zhang, H. R. (2016) The Indian genus *Ajotrips* (Thysanoptera: Thripidae) newly recorded from China, with description of the male. *Zootaxa* 4196, 597–599. <http://doi.org/10.11646/zootaxa.4196.4.9>
- Zhang, S. M., Wang, Z. H., Li, Y. J. & Mound, L. A. (2018) One new species, two generic synonyms and eight new records of Thripidae from China (Thysanoptera). *Zootaxa* 4418, 370–378. <https://doi.org/10.11646/zootaxa.4418.4.3>
- Schliephake, G. (1975) Beiträge zur phylogenetischen Systematik bei Thysanopteren. *Beiträge zur Entomologie* 25, 5–13.
- ThripsWiki (2024) ThripsWiki - providing information on the World's thrips. http://thrips.info/wiki/Main_Page. Accessed on: 2024-07-12.
- zur Strassen, R. (2003) Die terebranten Thysanopteren Europas. *Die Tierwelt Deutschlands* 74, 1–277.

Citation: Mirab-balou, M. (2025) *Rubiothrips* Schliephake, a newly recorded genus of Thripinae from China (Thysanoptera: Thripidae). *J. Entomol. Soc. Iran*, 45 (1), 139–144.

DOI: <https://doi.org/10.61186/jesi.45.1.11>

URL: https://jesi.areeo.ac.ir/article_131275.html





تریپس از کشواره‌های جنس مجددی از زیرخانواده Thysanoptera: Thripidae) *Rubiothrips Schliephake*

از کشور چین Thripinae

مجید میراب بالو

گروه گیاه‌پژوهی، دانشکده کشاورزی، دانشگاه ایلام، ایلام، ایران

تاریخچه مقاله

۱۴۰۳/۰۳/۲۴ دریافت:

چکیده: تریپس (Thysanoptera: Thripidae) از زیرخانواده *Rubiothrips vitis* (Priesner, 1933) که از استان سیچوآن جمع آوری شده است، اولین گزارش از جنس و گونه‌ای جدید از کشور چین در این مقاله می‌باشد.

۱۴۰۳/۰۵/۳۱ پذیرش:

۱۴۰۳/۱۱/۰۳ انتشار:

کلمات کلیدی: بالریشکداران، گروه جنس *Anaphothrips*, سیچوآن، چین

دیر تخصصی: شهاب منظری

نویسنده مسئول: مجید میراب بالو

m.mirabbalou@ilam.ac.ir

DOI: <https://doi.org/10.61186/jesi.45.1.11>

