Russian Entomol. J. 33(3): 276–279

A new short-winged species of the genus *Stenchaetothrips* Bagnall, 1926 (Thysanoptera: Thripidae) from Central Yakutia (Siberia)

Новый короткокрылый вид трипса рода *Stenchaetothrips* Bagnall, 1926 (Thysanoptera: Thripidae) из Центральной Якутии (Сибирь)

T.G. Evdokarova[1], G. Vierbergen[2]
Т.Г. Евдокарова[1], Г. Вирберген[2]

[1] Institute for Biological Problems of Cryolithozone SB RAS, Lenin Avenue 41, Yakutsk 677980 Russia.
[1] Институт биологических проблем криолитозоны СО РАН, пр. Ленина, 41, Якутск 677980 Россия.
[2] Netherlands Institute for Vectors Invasive plants and Plant health, Section of Entomology, P. O. Box 9102, 6700 HC, Wageningen, Netherlands.
Taisiya Evdokarova evdokarova@mail.ru
G. (Bert) Vierbergen g.vierbergen@nvwa.nl; ORCID 0000-0002-0751-2741
* corresponding author

KEY WORDS: *Stenchaetothrips*, micropterous species, Poaceae, identification key, Central Yakutia.
КЛЮЧЕВЫЕ СЛОВА: *Stenchaetothrips*, короткокрылый вид, Poaceae, ключ, Центральная Якутия.

ABSTRACT: A new species of *Stenchaetothrips* Bagnall, 1926 is described from seven micropterous females collected from Poaceae in northeast Russia (Central Yakutia). An identification key to genera of the *Thrips*-genus group in Russia and a key to the Palaearctic *Stenchaetothrips* species are included. This is the first micropterous species of the genus described.

РЕЗЮМЕ: Описан новый короткокрылый вид *Stenchaetothrips* Bagnall, 1926 с Poaceae из северо-восточной России (Центральная Якутия). Приведены отличительные признаки трех близких видов в фауне России и ключ видов рода *Stenchaetothrips* Палеарктики.

Introduction

The Old World genus *Stenchaetothrips* Bagnall, 1926 includes 42 species in the world fauna [ThripsWiki, 2022], which live exclusively on Poaceae. A majority of the species is associated with Southeast-Asian tropical bamboo (Bambusoidea). Usually they were found in these plants feeding on the young culm tissue. The other species of the genus were found on other Poaceae, with *S. biformis* (Bagnall, 1913) known as a pest in rice. Descriptions of the genus *Stenchaetothrips* are given by Tyagi & Kumar [2008] and Masumoto & Okajima [2013]. The latter authors discussed the position of *Stenchaetothrips* in the *Thrips*-genus group and keyed out this genus within this group based on discriminatory character states. Representatives of *Stenchaetothrips* can be distinguished from species of the large genus *Thrips* by having ocellar setae II longer than ocellar setae III. From the Palaearctic Region the following species have been reported*:

S. bambusicola Mound, 2011 — China (Sichuan); Poaceae [Zhang, Feng, 2017];

S. biformis (Bagnall, 1913) — Palaearctic, Southeast Asia, introduced in South America; Poaceae [Zur Strassen, 2003], described from *Phragmites australis*;

S. dentatus Masumoto, Okajima, 2013 — Japan, Honshu; bamboo;

S. gaomiaoensis Zhang et Feng, 2017. China (Sichuan); bamboo;

S. lankawiensis Ng et Mound, 2012 — Japan (Honshu, Kyushu, Ryukyus)**, Taiwan, Malaysia; grass;

S. martini Mound, Gunawardana et Dongmei, 2017 — England, Netherlands***, France, New Zealand; *Phyllostachys aurea*, *Pleioblastus* sp. [Mound *et al*., 2017];

S. pleioblasti Masumoto, Okajima, 2013 — Japan (Honshu); *Pleioblastus* sp.;

S. undatus Wang, 2000 — Japan (Honshu, Ryukyus, Ogasawara Islands, Izu Islands), Taiwan; *Miscanthus sinensis*** [Wang, 2000].

* Included are species collected at or close to the border of the palaearctic biogeographic realm, distribution and hosts are from Masumoto, Okajima (2013), unless otherwise indicated.

** Probably introduced in Palaearctic Japan with *Miscanthus sinensis* as ornamental, because no males are reported from this region.

How to cite this article: Evdokarova T.G., Vierbergen G. 2024. A new short-winged species of the genus *Stenchaetothrips* Bagnall, 1926 (Thysanoptera: Thripidae) from Central Yakutia (Siberia) // Russian Entomol. J. Vol.33. No.3. P.276–279. doi: 10.15298/rusentj.33.3.03

*** New record: NL: Wageningen, 23-vi-2021, *Pseudosasa japonica*; formerly incorrectly recorded for NL as *Stenchaetothrips spinalis* Reyes (Vierbergen et al, 2010).

Material and methods

During an excursion close to the Lena River in Central Yakutia a small number of Thysanoptera specimens were collected from a grassy vegetation at the shore of a small lake at the edge of the larch forest. After collecting thrips by knocking on a white cloth, placed in an ethyl acetate stain and investigated in the laboratory, specimens were preserved in ethanol 70%. Specimens were macerated with KOH and enclosed in Canada Balsam. All measurements and descriptions were made with an Olympus BX51 microscope at 40x, 100x, 200x and 400x magnification, with phase contrast option. All measurements are in micrometers (µm). Photos were taken with a Leica DFC450 C camera and Imagic IMS Client software. Abbreviations: CPS — campaniform sensilla, po — postocular setae, pa — pronotal posteroangular setae, pm — pronotal posteromarginal setae.

Order THYSANOPTERA
Suborder TEREBRANTIA
Family THRIPIDAE *Stenchaetothrips* Bagnall, 1926

Stenchaetothrips yakuticus
Evdokarova et Vierbergen, **sp.n.**
Figs 1–9.

MATERIAL. Russia: *Central Yakutia*: Pokrovsky tract, 25 km SSW of Yakutsk, shore of small lake at the edge of forest, Poaceae, 61’49' N, 129’39' E, 27.07.2017, Evdokarova T G. leg., 7 micropterous females.

Holotype: 1 ♀ in Senckenberg Natural History Museum, Frankfurt am Main, Germany (SMF). Paratypes: 1 ♀ in SMF, 1 ♀ in Netherlands Institute for Vectors Invasive plants and Plant health, Wageningen, 3 ♀♀ in Institute for Biological Problems of Cryolithozone (IBPC) SB RAS, 1 ♀ Zoological Institute RAS (St. Petersburg).

DESCRIPTION.

HOLOTYPE FEMALE. Micropterous. Body brown (Fig. 1), tarsi and apex of tibia light brown, antennae brown, wing light brown.

Antennal 7-segmented (Fig. 2); segment I without median dorsal apical setae, segment II with a mid-dorsal seta below CPS, segments III–IV with short forked sense cone; III–VI with some rows of microtrichia on both dorsal and ventral surfaces.

Head wider than long (Figs. 1, 3), ocellar setae I absent, setae II slightly longer setae III (Fig. 3). Pronotum with 2 pairs of developed pa (Fig. 4); anterior half weakly sculptured with widely spaced transverse striae, posterior half almost completely smooth, having a few posterior striae only; with four pairs of discal setae, the posterosubmarginal pair the longest and about equal in length to the medial posteromarginal setae. Mesonotum with median pair of setae situated far from posterior margin (Fig. 5); metascutum sculptured with narrow spaced longitudinal anastomosing striae except anteromedially 2/3 with transverse sculpture (Fig. 5); median pair of setae behind anterior margin. Mesosternum with spinula, metasternum without spinula (Fig. 6).

Wing micropterous, light brown; clavus with three veinal and one discal (Fig. 5).

Abdominal tergites II–VII with transverse irregular sculpture, in posteromedial half faint, posteromarginally with scallops (Fig. 7); tergite II with 4 lateral marginal setae; tergites VII–VIII with paired ctenidia, strongly reduced on VII, present on VIII; tergite VIII with sculpture in posteromedial half absent, with posteromarginal comb weakly developed at sides with partly grouped microtrichia (Fig. 8); tergite IX with two pairs of CPS; tergite X with longitudinal median split almost complete; sternites III to VII with 2 pairs of posteromarginal setae; all posteromarginal setae arising from posterior margin on II to VII except S1 setae on VII situated ahead of posterior margin (Fig. 9); pleurotergites without discal setae. Ovipositor developed.

Measurements (holotype in micron). Body length 635. Head length/width 129/157; setal lengths: ocellar II 23, ocellar III 19, po I 19, po III 16, 18. Antennal segments I–VII length/width 22.0/29.0, 36.8/25.5, 48.8/21.0, 37.4/20.3, 36.6/18.8, 50.0/19.8, 22.0/7.2. Pronotum length/width 124/198, setal lengths: outher pa 43–48, inner pa 60, medial posteromarginal 23–26. Forewing length 96–103, hindwing 69–72. Metascutum length antero-angular setae 29, medial setae 32. Abdominal tergite IV length S1 30, distance between S1 55, tergite IX S1 93-96, S2 about 106.

ETYMOLOGY. The new species is named after the Yakutia – Siberian region of the Russian Federation.

Comments

Females of this new species can be easily distinguished from other species of *Stenchaetothrips* by its short wings and more character states related to wing reduction such as given by Mound *et al*. [2005]. These authors give a detailed description of the macropterous and apterous form of *Frankliniella lantanae* Mound, Nakahara et Day, 2005 and discussed wing polymorphism in the genus *Frankliniella.*

In the key to Japanese *Stenchaetothrips* of Masumoto & Okajima [2013] the female described above runs to *S. amamiensis*, a species which differs from *S. yakuticus* in: greater length/width antennal segment IV, pronotum entirely sculptured and pa length about equal the same size and abdominal tergite VIII with posteromarginal comb complete.

Zhang & Feng [2017] give an identification key to species of China; three species have several relevant characters in common with *S. yakuticus*, but differ in:

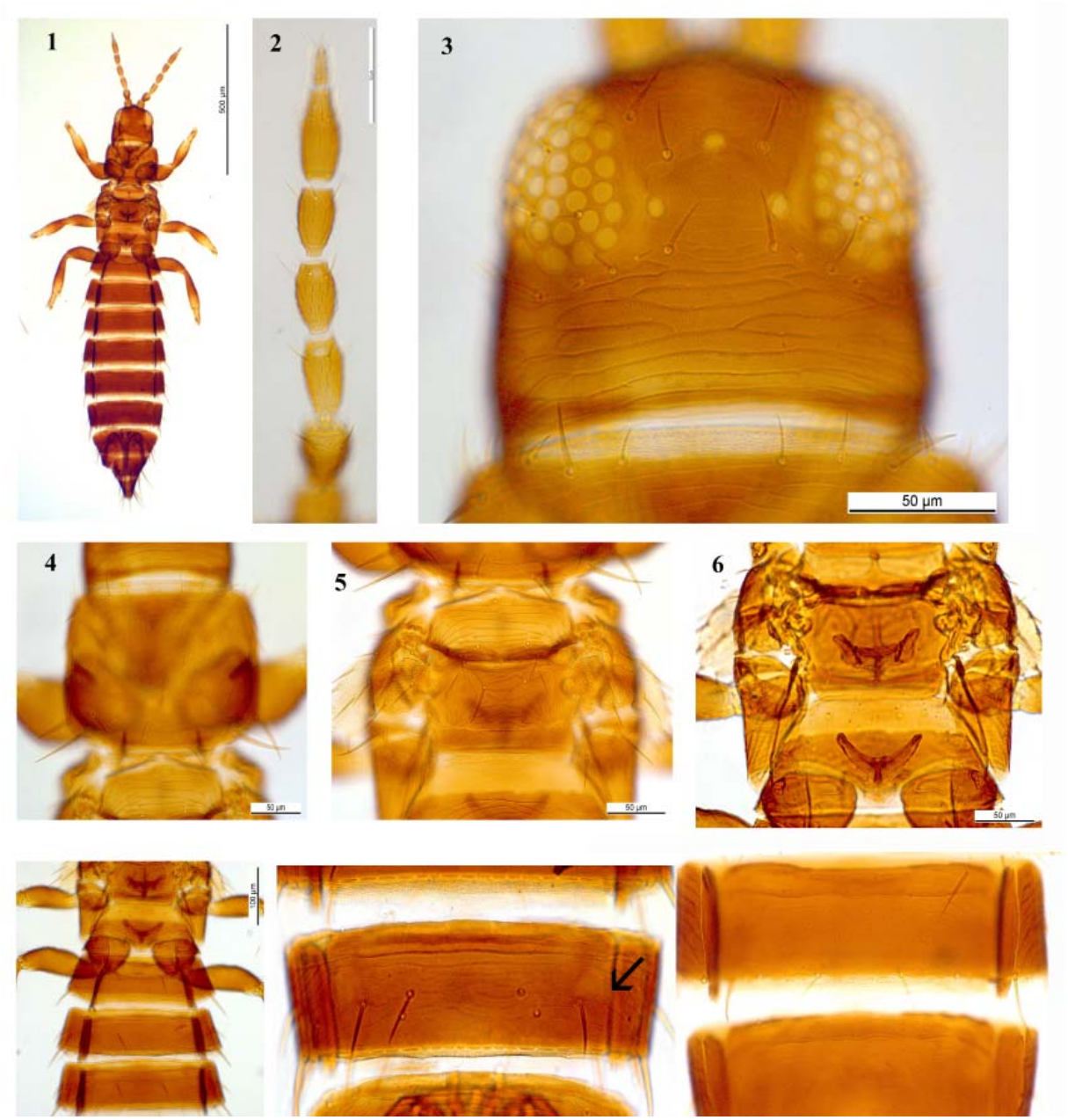
S. brochus Wang, 2000: interocellar setae long, about equal to the distance between hind ocellae, and pa setae long, more than half the length of pronotal length.

S. karnyianus (Priesner): po I and III more than half the length of length of the compound eye, and pa setae long, more than half the length of pronotal length.

S. fusca Moulton, 1936, a species known from the Philippines and China. From description of Moulton [1936] it differs in having antenna III yellow, shorter antennal segments (especially segment III: 36 microns), outer pa setae longer (60 microns), and tergite VIII with posteromarginal comb complete.

Identification key to Palaearctic *Stenchaetothrips*

1. Body brown 2
– Body yellow..... 8
2. Micropterous, ocellar setae II slightly longer ocellar setae III, po I longer than po III. Tergite VIII with posteromarginal comb developed at sides only. Mesonotum with pairs CPS. Mesofurca with spinula ..... ***yakuticus*** sp. n.
– Fully winged..... 3
3. Fore wing uniformly dark; abdominal tergite IX with posterior pair of CPS only; po I often absent.....***biformis***
– Fore wing not uniformly dark, basal fourth pale; abdominal tergite IX with both anterior and posterior pairs of CPS; po I always present..... 4
4. Po III distinctly longer than setae I..... 5
– Po III subequal to, at least not distinctly longer than setae I..... 7
5. Mesofurca very weak. Abdominal tergites with distinct microtrichia laterally and with scallops or irregular microtrichia medially on posterior margin; all femora dark; metascutum usually without paired CPS, sometimes with paired or only one CPS..... ***dentatus***



Figs 1–9. *Stenchaetothrips yakuticus* **sp.n**. ♀: 1 — body; 2 — antennae; 3 — head; 4 — pronotum; 5 — meso- and metanotum; 6 — meso- and metathoracic endofurca; 7 —— abdominal tergites I–V; 8 — abdominal tergites VII–VIII; 9 — abdominal sternites VI–VII.
Рис. 1–9. *Stenchaetothrips yakuticus* **sp.n**. ♀: 1 — внешний вид; 2 — усики; 3 — голова; 4 — пронотум; 5 — мезо- и метанотум; 6 — мезо- и метаторакс фурка; 7 — брюшные тергиты I–V; 8 — брюшные тергиты VII–VIII; 9 — брюшные стерниты VI–VII.

– Mesofurca with spinula 6
6. Abdominal II–VII without teeth on posterior margin; legs yellow with brown femora. Male brown ....***gaomiaoensis***
– Tergites with I–IV variably weak triangular craspedal microtrichia, legs mainly yellow, all femora weakly shaded with light brown. Hind coxa upper surface with 5 to 10 microtrichia on sculpture lines. Male yellow ..... ***martini***
7. Female brown with a medially transverse pore plate on abdominal sternites V–VI Meso-metanotum with paired CPS ..... ***bambusicola***
– Female usually bicolored, head and abdomen brown, thorax yellowish brown to pale brown and usually distinctly paler than abdomen. Mesonotum with paired CPS; metanotum without CPS..... ***undatus***
8. Body uniformly yellow; fore wings uniformly pale; po III subequal to setae I; mesonotum without CPS anteromedially; abdominal tergite VIII with posteromarginal comb of irregular small teeth ..... ***langkawiensis***
– Body not uniformly yellow, often yellow with posterior segments of abdomen dark; fore wings variable, usually pale with shaded median third to fourth but often uniformly pale; po III distinctly longer than setae I; mesonotum with paired CPS anteromedially; abdominal tergite VIII with posteromarginal complete comb..... ***pleioblasti***

Acknowledgments. The authors are grateful to N.N. Vinokurov (IBPC SB RAS, Yakutsk) and to V.I. Rozhina (Kaliningrad Interregional Veterinary Laboratory) for valuable advice during the work on the paper.

The research was carried out within the state assignment of Ministry of Science and Higher Education of the Russian Federation (theme No. FWRS-2021-0044, reg. No.121020500194-9).

Competing interests. The authors declare no competing interests.

References

Bagnall R.S. 1926. Brief descriptions of new Thysanoptera XV // Annals and Magazine of Natural History. Ser.9. Vol.18. No.103. P.98–114.

Masumoto M., Okajima S. 2013. Review of the genus *Thrips* and related genera (Thysanoptera, Thripidae) from Japan // Zootaxa. Vol.3678. P.1–65.

Moulton D. 1936. Thysanoptera of the Philippine Islands // Philippine Journal of Agriculture. Vol.7. P.263–273.

Mound L.A. 2002. The *Thrips* and *Frankliniella* genus groups: the phylogenetic significance of ctenidia // Thrips and Tospoviruses: Proceedings of the 7th International Symposium on Thysanoptera. Australian National Insect Collection. Canberra. P.379–386.

Mound L.A., Nakahara S., Day M.D. 2005. *Frankliniella lantanae* sp.n. (Thysanoptera); a polymorphic alien thripid damaging *Lantana* leaves in Australia // Australian Journal of Entomology. No.44. P.279–283.

Mound L.A., Gunawardana D.N., Dongmei L.I. 2017. A new species of *Stenchaetothrips* (Thysanoptera, Thripidae) from Bamboo, based on morphological and molecular data // Zootaxa. Vol.4323. P.295–300.

Mound L.A., Nielsen M., Hastings A. 2017. Thysanoptera Aotearoa – Thrips of New Zealand. Lucidcentral.org, Identic Pty Ltd, Queensland, Australia. Retrieved from: Thrips of New Zealand (lucidcentral.org) (accessed 20.04.2022)

Ng Y.F., Mound L.A. 2012. The *Stenchaetothrips* species (Thysanoptera, Thripidae)of Malaysia, with one new species // Zootaxa. Vol.3357. P.56–62.

ThripsWiki 2022. ThripsWiki – providing information on the World's thrips. http://thrips.info/wiki/Stenchaetothrips (accessed 15.04.2022)

Tyagi K., Kumar V. 2008. Two new species of *Stenchaetothrips* (Thysanoptera: Thripidae) from India // Zootaxa. Vol.1851. P.58–64.

Vierbergen G., Kucharczyk H., Kirk W.D. 2010. A key to the second instar larvae of the Thripidae of the Western Palaearctic region (Thysanoptera) // Tijdschrift voor Entomologie. Vol.153. P.99–160.

Wang C.L. 2000. The genus *Stenchaetothrips* Bagnall (Thysanoptera, Thripidae) from Taiwan // Chinese Journal of Entomology. Vol.20. P.243–253.

Zhang S.M., Feng J.N. 2017. A new species and a new record *Stenchaetothrips* Bagnall (Thysanoptera, Thripidae) from China // Transactions of the American Entomological Society. Vol.143. No.2. P.199–205.

Zur Strassen R. 2003. Den Terebranten Thysanopteras Europas und des Mittelmeer-Gebieten // Die Tierwelt Deutschlands. Bd.74. Keltern: Goecke & Evers. 277 S.