



First record for France of a little-known palaeartic cranefly: *Tipula (Pterelachisus) jutlandica* Nielsen, 1947 (Diptera, Tipulidae)

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Abstract. – *Tipula (Pterelachisus) jutlandica* Nielsen, 1947, a little-known Palaeartic cranefly species, is recorded for the first time from France, in Haute-Saône, at a site managed by the Conservatoire d'espaces naturels de Franche-Comté. Previously unpublished data for this species are also presented for Germany, Estonia and Mongolia. For the latter two countries, these represent the first records of the species.

Résumé. – **Première mention en France d'une tipule paléarctique peu connue : *Tipula (Pterelachisus) jutlandica* Nielsen, 1947 (Diptera, Tipulidae).** *Tipula (Pterelachisus) jutlandica* Nielsen, 1947, une espèce de tipule paléarctique très peu connue, est signalée pour la première fois en France, en Haute-Saône, dans un site géré par le Conservatoire d'espaces naturels de Franche-Comté. Des données inédites concernant cette espèce sont également présentées pour l'Allemagne, l'Estonie et la Mongolie. Pour ces deux derniers pays, il s'agit des premières mentions de l'espèce.

Keywords. – Faunistics, Palaeartic, Estonia, Germany, Mongolia, new records.

Tipula (Pterelachisus) jutlandica Nielsen, 1947, is a cranefly species with a very wide distribution across the northern Palaeartic ecozone, extending from Western Europe to Mongolia. Despite this broad range, the species remains poorly documented, with only around twenty recorded localities to date (table I). As part of entomofauna surveys carried out in 2023 by the Association des Amis de la Réserve naturelle du Lac de Remoray, a male specimen of this species, previously unrecorded from France, was collected at a site in Haute-Saône managed by the Conservatoire d'espaces naturels de Franche-Comté.

DISCOVERY OF THE SPECIES IN HAUTE-SAÔNE

Material examined. – Montarlot-lès-Champlitte (70354), La Vieille Côte, 47°38'30.1"N 5°31'08.9"E, alt. 310 m, 07-21 May 2023, 1 ♂ caught using a Malaise trap (fig. 1-2), *leg.* Dominique Langlois & Bruno Tissot, *det.* Pierre Tillier (in collection Pierre Tillier).

Table I. – Summary of known records of *Tipula (Pterelachisus) jutlandica* Nielsen, 1947.

Country	Date(s)	Location	Sex	Source
Denmark	31.V.1935	Silkeborg, Vesterskov	1 ♂	NIELSEN, 1947; PETERSEN <i>et al.</i> , 2001
Estonia	26.VI-11.VII.2010	Igaküla (58°36'03.5"N 23°07'42.0"E)	1 ♂	PODENAS, unpublished data
Finland	18.VI.2008	Parikkala	1 ♀	SALMELA, 2009, pers. comm.
Finland	12.VI.2018	Lempäälä	1 ♀	RASIMUS, 2021, 2022, pers. comm.
Finland	8.VI-8.VII.2019, 10-26.VI.2023	Mäntsälä	1 ♂ + 1 ♀	RASIMUS, 2022
France	7-21.V.2023	Champlitte (47°38'30.1"N 5°31'08.9"E)	1 ♂	Present study
Germany	11-25.V.2008	Grenzach-Wyhlen, Augstberg	1 ♂	HEISS, 2017, pers. comm.
Germany	2-16.V.2009	Grenzach-Wyhlen, Otto-Jäggi-Weg	1 ♂	HEISS, 2017, pers. comm.
Germany	26-31.V.2013	Regensburg, Brandlberg (49°02'25.5"N 12°08'36.2"E)	1 ♂	HEISS, unpublished data
Lithuania	4.VI.1989	Vilnius	2 ♂	PODENAS, 1990, 1992, pers. comm.
Mongolia	1-2.VII.2006	Renchinlkhümbe (51°04'45.0"N 99°42'35.5"E)	1 ♂	PODENAS, unpublished data
Mongolia	6.VII.2006	Bayanzürkh (50°11'55.7"N 99°01'53.3"E)	1 ♂ + 2 ♀	PODENAS, unpublished data
Russia	27.V.1995, 29.V.1995, 1.VI.1995, 5.VI.1995, 9.VI.1996, 10.VI.1996, 12.VI.1996, 13.VI.1996, 25.V.1997, 11.VI.1997, 15.VI.1997	Chashnikovo	10 ♂ + 4 ♀	PILIPENKO, 2009
Russia	6.VI.1989	Malino	2 ♀	PILIPENKO, 2009
Russia	31.V.1992	Zvenigorod	2 ♂	PILIPENKO, 2009
Russia	7.VI.1989, 2.VII.1997	Zelenograd	1 ♂ + 1 ♀	PILIPENKO, 2009
Russia	13.VI.1992	Konakovskiy Mokh	1 ♂	PILIPENKO, 2009
Russia	8.VI.1990, 10.VI.1990	Karakoksha	1 ♂ + 1 ♀	PILIPENKO, 1999 ; BARKALOV & SAAYA, 2014
Sweden	?	? (Jämtland)	1 ♂	TJEDER, 1955 ; SALMELA, 2011
Ukraine	29.IV-1.V.1950	Kaniv	1 ♂ + 1 ♀	SAVCHENKO, 1952, 1964, 1966

Remarks. – This species is characterised by its distinctive internal gonostyli, which bear a basal lobe with three clearly visible external points at the tip of the hypopygium (fig. 2).

Visual surveys were conducted on 2025, May 29th and 30th, at the capture site and in nearby woodland with similar geological and ecological characteristics to photograph the species. No additional observations were made (PT, pers. obs.).

Several other Tipulidae species were recorded, at the same site, both from the same Malaise trap operated between 2023, April 7th and June 3rd, and during the 2025 field surveys: *Nephrotoma appendiculata appendiculata* (Pierre, 1919), *N. flavescens* (Linnaeus, 1758), *N. quadrifaria quadrifaria* (Meigen, 1804), *Tipula (Dendrotipula) flavolineata* Meigen, 1804, *Tipula (Lunatipula) helvola* Loew, 1873, *T. (L.) longidens* Strobl, 1909, *T. (L.) truncata* Loew, 1873, *T. (L.) vernalis* Meigen, 1804, and *Tipula (Tipula) oleracea* Linnaeus, 1758 (present study; TILLIER, 2025).



Fig. 1. - *Tipula (Pterelachisus) jutlandica* Nielsen, 1947, habitus; male specimen captured at La Vieille Côte, Champlitte (Haute-Saône). Scale bar: 10 mm. (Photograph by Pierre Tillier).

DISCUSSION

The discovery of *T. (P.) jutlandica* in Haute-Saône represents a notable new record. Until now, the species had been reported from only seven countries: Germany (three localities: HEISS, 2017 and unpublished data), Denmark (one locality: NIELSEN, 1947; PETERSEN *et al.*, 2001), Finland (three localities: SALMELA, 2009; RASIMUS, 2021, 2022;), Lithuania (one locality: PODENAS, 1990, 1992), Russia (six localities: PILIPENKO, 1999, 2009), Sweden (one locality: SALMELA, 2011), and Ukraine (one locality: SAVCHENKO, 1952, 1964) (table I; fig. 3). More recently, the species has also recorded from Estonia (one locality: PODENAS, unpublished data) and Mongolia (two localities: PODENAS, unpublished data) (table I; fig. 3).

Only a single specimen was collected using a Malaise trap in spring-summer 2023, and no additional individuals were observed during targeted field surveys in May 2025. This apparent scarcity is consistent with the species' very low population densities as *T. (P.) jutlandica* is almost always collected as single individuals or pairs (table I).

This first French specimen was captured at the ecotone between a mesoxerophilous calcareous grassland (EUNIS code = 6210-24) and a woodruff beech-oak forest (EUNIS = 9130-5), on a south-west to west facing slope and largely dominated by small-diameter oaks. In the immediate vicinity of the capture site, there are also mesophilous shrublands with Privet (*Ligustrum vulgare* L., 1753)



Fig. 2. - *Tipula (Pterelachisus) jutlandica* Nielsen, 1947, hypopygium (lateral view); male specimen captured at La Vieille Côte, Champlitte (Haute-Saône). Scale bar: 1 mm. (Photograph by Pierre Tillier).

and Blackthorn (*Prunus spinosa* L., 1753), mesoxerophilous shrublands with St Lucie Cherry (*Prunus mahaleb* L., 1753), patches of pine woodland, and mobile calcareous screes (EUNIS = 8160-3). In Germany, the species was recorded from a site with thermophilous vegetation (*Pruno-Ligustretum*) above a quarry, surrounded by thermophilous and mesophilous mixed forests (*Carici-Fagetum*, *Asperulo-Fagetum* s.l. and *Galio-Fagetum buxetosum*) (HEISS, 2017). Another German record came from woodland dominated by downy oak (*Quercus pubescens* Willd., 1796) and small-leaved lime (*Tilia cordata* Mill., 1768) (HEISS, 2017). In Finland, the species has been collected in old, herb-rich deciduous forests characterised by mature aspen (*Populus tremula* L., 1753) (SALMELA, 2009; RASIMUS, 2022).

At the French site, the oak woodland is characterised by a dense, unmanaged understorey, which hampers field surveys. The presence of abundant coarse woody debris on the ground may nonetheless provide suitable microhabitats for larval development.

The capture date (between May 7th and 21st) falls within the known flight period of this spring species, which has a short emergence window. Of the 26 dated records currently available, most specimens were collected between early May and mid-June (table I). Only five records fall outside this interval: one from April 29th in Ukraine (SAVCHENKO, 1952, 1964), and four collected from after June 15th in Lithuania, Mongolia and Russia (PILIPENKO, 2009; PODENAS, unpublished data).

The apparent rarity of *T. (P.) jutlandica* across Europe and Asia remains puzzling, given that the habitats in which it occurs are relatively common and widespread. For other *Pterelachisus* Rondani, 1842 species which are also poorly known and exhibit a disjunct distributions, DUFOUR (1986) proposed that they may represent naturally declining relict species. This is notably the case for *Tipula (Pterelachisus) apicispina* Alexander, 1934, *T. (P.) cinereocincta cinereocincta* Lundström, 1907, *T. (P.) trifascingulata* Theowald, 1980, and *T. (P.) winthemi* Lackschewitz, 1932.

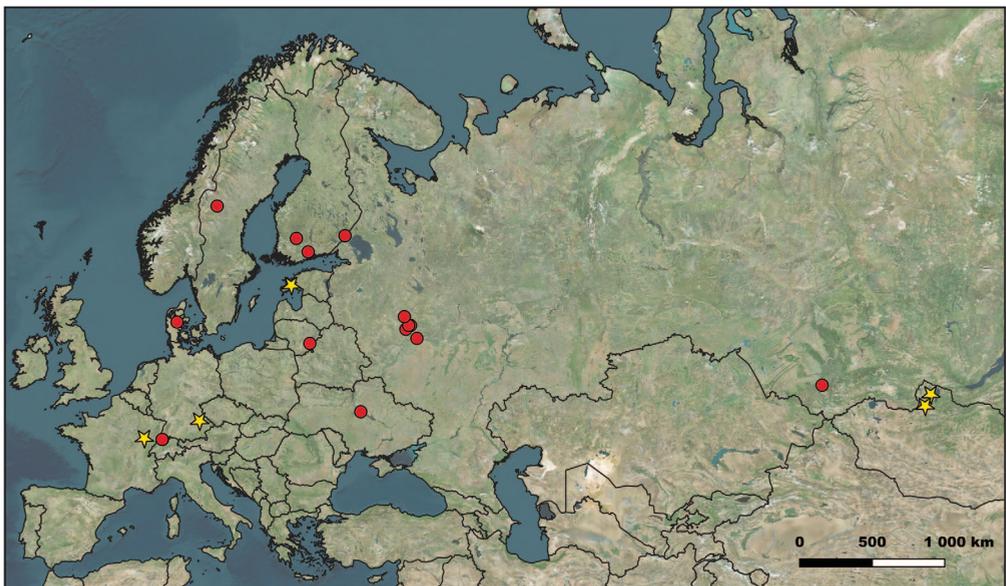


Fig. 3. – Distribution of *Tipula (Pterelachisus) jutlandica* Nielsen, 1947. Red circles: known localities; yellow stars: new localities (unpublished data and present study).

CONCLUSION

The discovery of *T. (P.) jutlandica* in eastern France slightly extends the known distribution of the species (fig. 3). The Haute-Saône locality now represents the westernmost confirmed occurrence and, based on current knowledge, the only site in France. Further research in similar habitats within the Grand Est and Bourgogne-Franche-Comté regions would help clarify the species' distribution and status in France.

More broadly, this record highlights, if further evidence were needed, the importance of protected natural sites, which provide refuge for heritage species whose presence and persistence may be restricted to highly localised relict habitats at the national scale.

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