

# Description of *Perithreticus neglectus* sp. n. from the West Usambara Mountains, Tanzania (Diptera, Psychodidae)

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## Abstract

## Background

The Psychodinae of the Afrotropical Region remain poorly understood. Slightly under 200 species have been described, but many countries have received very little attention from collectors and even countries where significant collection efforts have taken place have rarely had their collections studied in detail by specialist taxonomists.

## New information

*Perithreticus neglectus* sp. n. is described from the West Usambara Mountains, Tanzania, based on a male specimen collected in 1990. The new species is similar to *Perithreticus anderseni* Kvifte, 2015, which occurs in the same forest reserve, but can be separated by several genitalic characters, including the hypandrium well-developed with sclerotised anterior and posterior margins, gonocoxites narrower, the gonostyles with the slender apex shorter, the parameres shorter without pronounced basolateral projections and the surstylus with slightly fewer tenacula. The world fauna of *Perithreticus* now comprises five described species, of which two occur in the Afrotropical Region.

## Keywords

Psychodidae, Diptera, moth flies, Tanzania, West Usambara Mountains

## Introduction

The Psychodidae material, collected by the University of Bergen's Tanzania expeditions in the early 1990s (described in Andersen and Johanson 1992 and Wagner and Andersen 2007), has been partially treated by Wagner and Andersen (2007), Kvitte (2014), Kvitte (2015) and Kvitte and Andersen (2019) and a total of 17 species have been described from there. This is likely not reflecting the true diversity of the West Usambara Mountains, or even the diversity present in the collected material and the collection thus is continuously re-examined.

The genus *Perithreticus* Vaillant, 1973 was described for two Nearctic species characterised by surstylus with tenacula in an apical row, named and briefly characterised by Vaillant (1973) in his revision of Nearctic Trichopsychodina (as "Telmatoscopini of the Threticus group"). The genus was later revised and redefined by Kvitte (2015), who removed *Psychoda jonesi* Quate, 1955 from the genus, described a new Afrotropical species and speculated that *Philosepedon forcipata* Quate & Quate, 1967 and *Philosepedon pectinata* Quate & Quate, 1967 from Indonesia (Papua) might also belong to *Perithreticus*. Finally, Kvitte et al. (2016) described two *Perithreticus* species from Cuba and Costa Rica and presented the most recent diagnosis of the genus.

In the present paper, I describe a second species of *Perithreticus* from the West Usambara Mountains, which is also the second species of *Perithreticus* to be described from the Afrotropical Region.

## Materials and methods

The specimen was dissected, macerated in potassium hydroxide (KOH) and mounted in Canada balsam on a slide. Illustrations and measurements were made using a Leitz Diaplan 20 compound microscope with a drawing tube and an ocular micrometer. Measurements are given in  $\mu\text{m}$  with an accuracy of 2.5  $\mu\text{m}$ , except wings which are given in mm with an accuracy of 25  $\mu\text{m}$ . Morphological terminology follows Kvitte and Wagner (2017). The specimen is housed in the entomological collections of the University Museum of Bergen (ZMUB).

## Taxon treatment

### *Perithreticus neglectus* Kvitte, 2022 sp. nov.

- ZooBank [0C6FEF11-AC20-413F-9167-A16A38322558](https://doi.org/10.3896/BBID-0C6FEF11-AC20-413F-9167-A16A38322558)

## Material

### *Holotype:*

- a. scientificName: *Perithreticus neglectus* Kvifte, 2022; order: Diptera; family: Psychodidae; genus: *Perithreticus*; specificEpithet: *neglectus*; continent: Africa; country: Tanzania; stateProvince: Tanga; locality: Mazumbai forest reserve; verbatimLocality: Tanzania: Tanga Region, W. Usambara Mts., Mazumbai, Loc. B; decimalLatitude: -4.800; decimalLongitude: 38.500; geodeticDatum: WGS8; samplingProtocol: Malaise trap; year: 1990; month: 11; day: 3; verbatimEventDate: 03/11/1990; fieldNumber: B; catalogNumber: B-10800.; identifiedBy: Kvifte, Gunnar Mikalsen; institutionCode: ZMUB; occurrenceID: E2A19A9C-C73E-5E83-B9FD-B9EF71433970

## Description

**Adult male (n=1). Head** (Fig. 1A) longer than wide; vertex about a fifth of total head length; eye bridge of four facet rows, separated by 0.5 facet diameters; with single row of 8-9 postocular setae; interocular area slightly broader anteriorly; interocular suture triangular; frontal patch of setae alveoli crown-shaped with median posterior extension reaching anteriormost row of eye bridge; length of first palp segment 67.5, other palpomeres not preserved; labellum bulbous and setose; only single antenna with three flagellomeres preserved in specimen (Fig. 1B), scape stoutly barrell-shaped, of equal width; pedicel stout spheroid, wider than long; flagellomeres 1-3 symmetrical nodiform with paired ascoid insertions, ascoids lost; length of scape, pedicel and first three flagellomeres 70, 62.5, 130, 125, 125; **Thorax** with anepisternum with trapezoid hair patch, anterior spiracle with prolonged U-shaped posterior suture delimiting it from anepisternal hair patch; anepimeron triangular with sinusoid lower margin, ventral suture of anepimeron reaching about halfway into sclerite; posterior spiracle with operculum evenly setose; mid-coxa with anteromesal field of setae; **Wing** (Fig. 1C) ellipsoid, 2.25 mm long, 0.75 mm wide; membrane only with micropilosity; area between C and R<sub>1</sub> infusate; hyaline field below R<sub>1</sub> reaching level of medial fork; radial fork clearly distad of medial fork and around same level as CuA; outlines of R<sub>5</sub> and M<sub>4</sub> more strongly sclerotised than other veins; origin of R<sub>5</sub> with dark spot; jugum broadly angular U-shaped.

**Terminalia** (Fig. 1D, E) symmetrical, hypandrium with only anterior and posterior margin sclerotised, glabrous or membranous medially; gonocoxites reniform with parbasal process broadly triangular, meeting medially; single band of setae present, covering medial 5<sup>th</sup>, gonocoxal condyles with triangular plate laterally and narrow strip-like plate medially; gonostyli bluntly acuminate, covered in spiniform sensilla, with subapical trichiform sensilla nearly the length of broad gonostylar base; aedeagus with basiphallus short, about a third of length of distiphallus, divided into two phallomeres that fuse after a drop-shaped basal aperture, forming long parallel-sided rod-like distiphallus; parameres elongate curved subtriangular with lateral margins concave and mesal margins convex, blunt apically, basally with small pointed lateral processes; aedeagus reaching further than parameres; epandrium (Fig. 1E) wider than long; anteroventral surface covered in hairs; subepandrial sclerite only discernible as submedian keel in specimen; surstylus cylindrical, apparently curved, apically with 6-7

tenacula in single transverse row; hypoproct mostly naked, but with distal margin finely pilose, M-shaped; epiproct subrectangular with rounded corners; proctiger laterally with small sclerites (vestigial cerci?) pointing towards surstyli.

### Diagnosis

Can be recognised by the following combination of characters: radial fork distad of medial fork, hypandrium with large unsclerotised area medially, aedeagus parallel-sided with triangular parameres shorter than aedeagus, parameres with triangular basolateral expansions poorly developed, surstylus with 6 tenacula, gonostyle with subapical trichiform sensilla (see also key in Kvifte et al. 2016).

### Etymology

From Latin neglectus, "overlooked", "neglected", referring to the specimen not being included in the initial revision of Afrotropical Psychodini by Kvifte (2015).

### Distribution

Only known from the type locality in the Mazumbai Forest Reserve, West Usambara Mountains, Tanzania.

## Acknowledgements

I am grateful to Per Djursvoll and Steffen Roth who hosted my 2021 visit at the University Museum of Bergen and to Trond Andersen who facilitated my study of Tanzanian Psychodidae. Santiago Jaime Schinkel offered interesting discussions on the morphology of the new species and, together with Greg Curler, offered constructive comments which greatly benefitted the manuscript.

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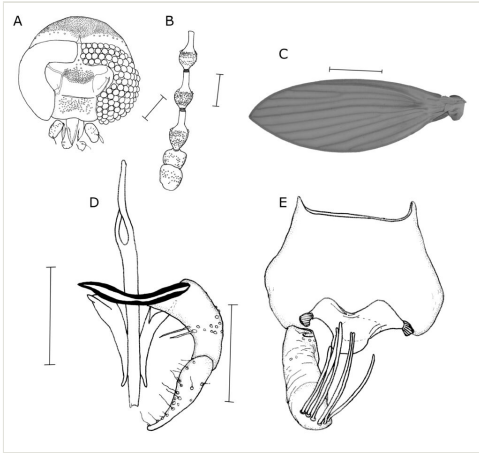


Figure 1.  
Morphological illustrations of *Perithreticus neglectus* sp. n. **A** head; **B** antenna; **C** wing; **D** gonopods, aedeagus and parameres; **E** epandrium and proctiger. Scale bars: 100  $\mu$ m (A, B, D, E), 500  $\mu$ m (C).