

Siphonaptera Neerlandica

Faunae nova species III

by

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Eight out of nine fleas from a red squirrel, collected by Mr R. H. MULDER, proved to be the common squirrel-flea *Monopsyllus sciurorum sciurorum* Schr., but no. 9 presented to my great joy a new species for the fauna of the Netherlands, viz.

Tarsopsylla octodecimdentata (Kolenati, 1863). Schalkhaar, 24-V-1949. 1 female off *Sciurus vulgaris russus* Miller, leg. R. H. MULDER.

I should point out that C. RITSEMA in his list of known fleas from the Netherlands (1) mentions under "nr. 7 *Ctenonotus octodecimdentatus* Kol., from *Mus musculus* Linn. (at Rhoon nr. Rotterdam, leg. SCHEPMAN); from *Mus decumanus* Pall. (at Leiden, leg. RITSEMA) and from ? in the Rotterdam Zoo, leg. PIAGET". But in a footnote he remarks: „In all probability this is the species which is described by Bosc as *Pulex fasciatus* in 1801 and which was found by him on the mole, the rat and on *Myoxus nitela* Linn." — I would say that in all probability — better: in all certainty — the specimens of the species which RITSEMA considered to be *Ct. octodecimdentatus* were indeed Bosc's *Pulex fasciatus*. This is clearly indicated by the hosts he mentions: *T. octodecimdentata* is normally only found on squirrels and *N. fasciatus* occurs on *Mus musculus* and *Rattus norvegicus* (*Mus decumanus*) and is the common flea throughout a Zoo. Since RITSEMA's flea-collections do not exist any more, we cannot prove the safe assumption that his *T. octodecimdentata* (Kol.) was *N. fasciatus* (B.d'A), but there is little doubt about it.

There has been some confusion between these two very distinct species. In his description of *Pulex fasciatus* Bosc TASCHENBERG (2) says without any justification (but obviously taking RITSEMA's footnote-remark for granted): "KOLENATI beschrieb dieselbe Art als *Ctenonotus octodecimdentatus* von *Cricetus frumentarius*". OUDEMANS (3) also regarded KOLENATI's species as a synonym of *Ceratophyllus fasciatus* (Bosc) and JORDAN and ROTHSCCHILD

(4) said: „This is a *Ceratophyllus*, probably *fasciatus* Bosc 1801, of which we shall treat the name as a synonym, following BAKER, who identified the species with *fasciatus*

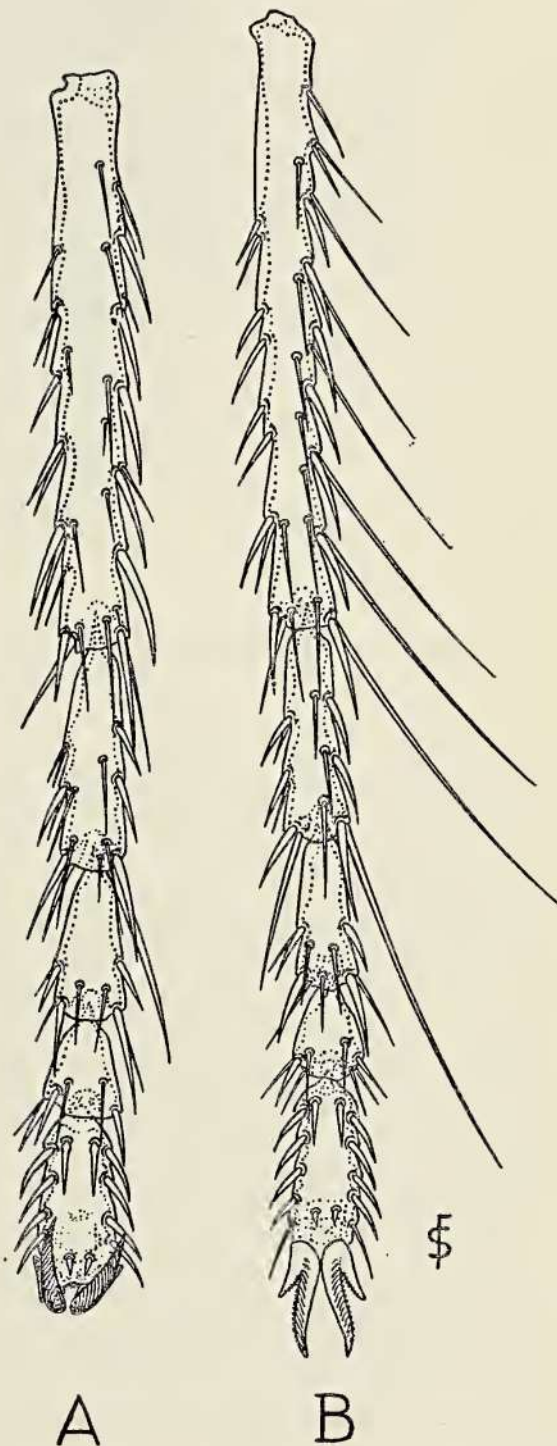


Fig. 1. *Tarsopsylla octodecimdentata* (Kol.). A. Tarsus III of female.

B. ibid. of male.

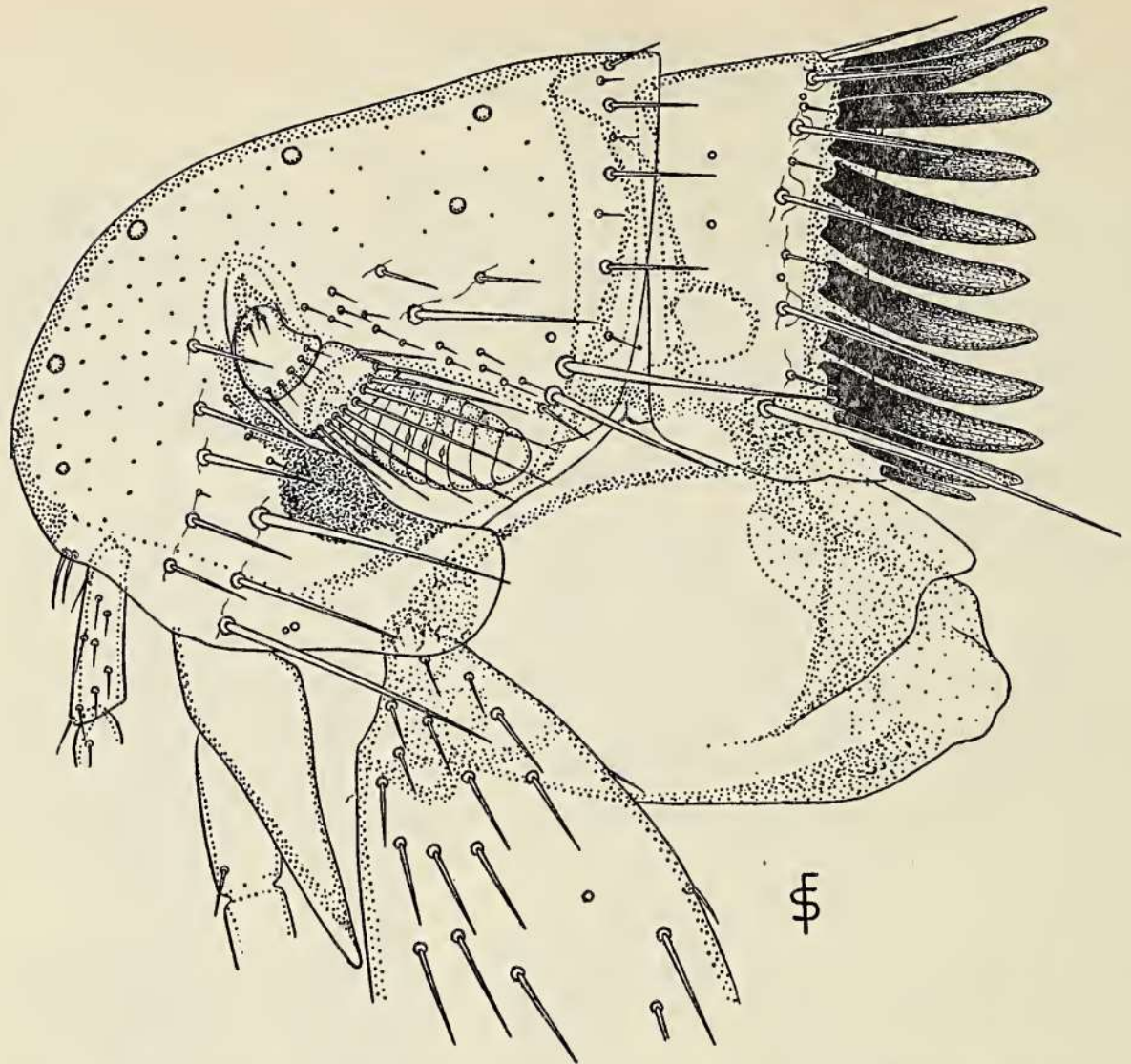


Fig. 2. *Tarsopsylla octodecimdentata* (Kol.) ♀ (from Schalkhaar, Holland).
Head, prothorax and base of coxa I.

in 1904". — This confusion with *N. fasciatus* is somewhat strange, for — whereas KOLENATI's flea-descriptions are generally atrociously bad — in the description of *Ctenonotus* (nec *Ctenonotus* Fitzinger 1843) *octodecimdentatus* he gives in plain words the most characteristic feature of the species (5): „die Metatarsen der Hinterbeine auffällig lang, fast von der Länge des übrigen Tarsus". No other fleas in Europe have these long metatarsi, so his description simply could not apply to *Nosopsyllus fasciatus* (B.d'A). That this fact has been overlooked is probably due to WAGNER, who in 1898 described a new species: *Ceratophyllus uralensis*, and did not discover until 1927 that his *C. uralensis* was the same species as KOLENATI's *Ct. octodecimdentatus*. So in the time between those two years we find several records of *C. uralensis* W. There was then no need to bother about KOLENATI's description; the name *Ct. octodecimdentatus* was put aside as a synonym of *N. fasciatus*. Then WAGNER recognized that KOLENATI had priority and from that year (1927) *Ceratophyllus uralensis* W. became one of the many synonyms in flea-nomenclature.

Tarsopsylla octodecimdentata (Kol.) is a Palaearctic species; it has been found in Holland, Germany, Switzerland, Sweden, Finland, Estonia, Jugoslavia, Bulgaria, Russia and N. Asia.

This species has been most inadequately figured; the only published drawings are of the clasper (6) (not a very good drawing), the metathorax (7) and a very sketchy tarsus (8). Therefore I add here the necessary drawings, which will be an aid in identifying this species, and I would like to make the following remarks on some of its morphological details.*)

*) There is only one other very closely related species in the Holarctic genus *Tarsopsylla*, namely the Nearctic *T. coloradensis* (Baker) (also living on Sciuridae), and the remarks are also valid for that species.

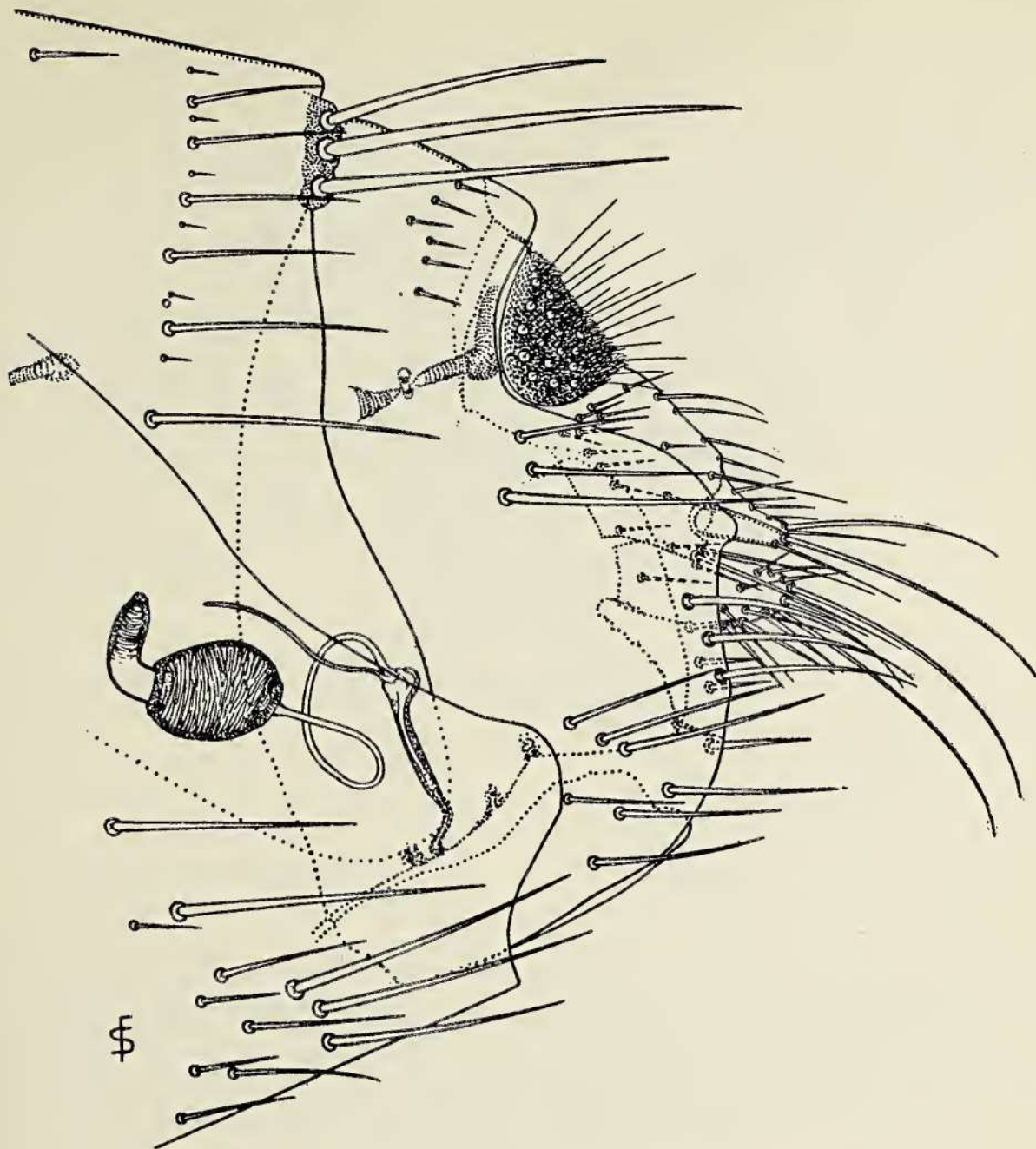


Fig. 3. *Tarsopsylla octodecimdentata* (Kol.) (from Schalkhaar, Holland).
Terminalia of ♀.

a) Frontal tubercle. WAGNER always stated that *Tarsopsylla* has no frontal tubercle, which would be exceptional in the family of Ceratophyllidae, to which this genus belongs. On the contrary EWING & FOX (9) say: "Frontal tubercle angulate apically and concealed in a frontal notch". Because I was unaware of the latter statement and believed WAGNER at the time, I was surprised — when looking at the unmounted specimen of the species under a binocular stereoscopic microscope — to see a distinct, though only very slightly protruding, frontal tubercle; after mounting in Canada balsam it was faded and hardly discernable. The study of the frontal tubercle in the mounted series of both species of *Tarsopsylla* in the ROTHSCHILD Flea Collection made me conclude that: *Tarsopsylla* really has a frontal tubercle, but it is often not visible (in mounted specimens). I do not think the tubercle is deciduous, but vestigial. The frontal tubercle as shown in fig. 2 is the most prominent form in which it occurs in *Tarsopsylla*. Generally it is less developed so that it seems to be absent in the majority of specimens.

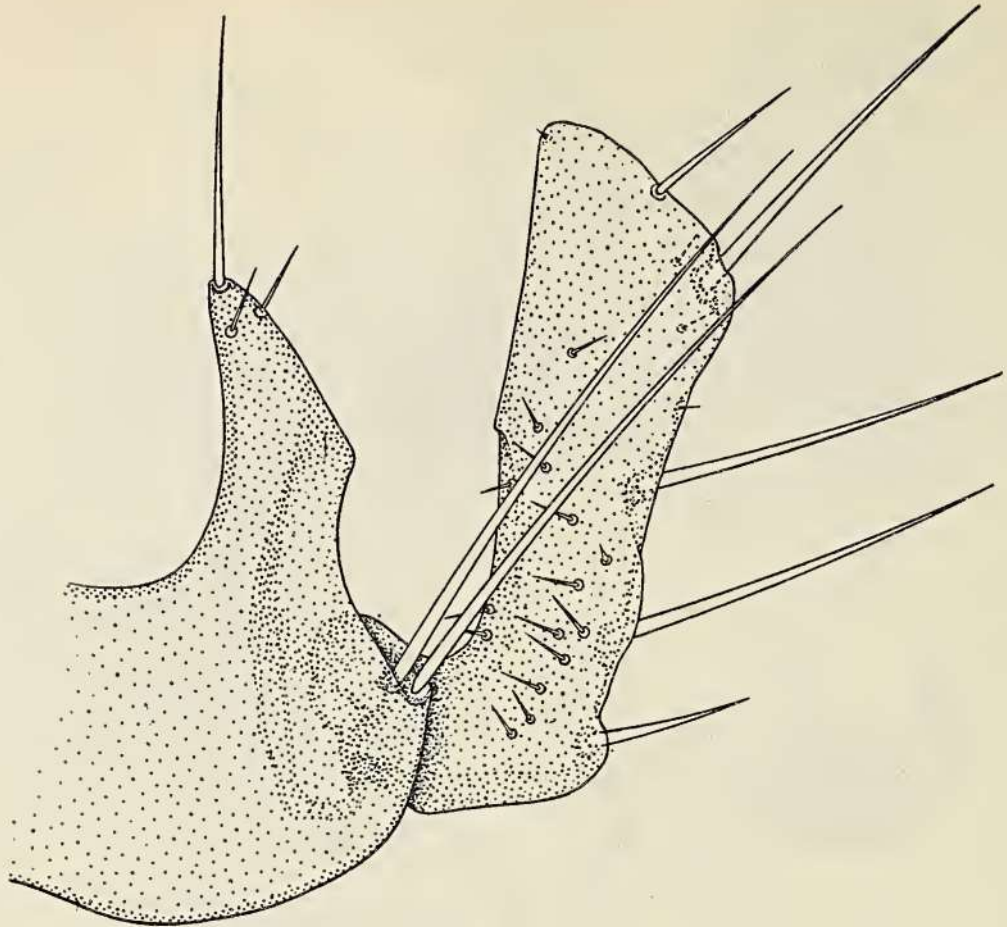


Fig. 4. *Tarsopsylla octodecimdentata* (Kol.) ♂ (from Wengen, Switzerland). Clasper.

Therefore I would not like to blame WAGNER for his assertion that there is no frontal tubercle in *Tarsopsylla*, but on the other hand I think that the wording of EWING & FOX is too positive and gives the impression of a well-developed tubercle being present. In my opinion it would be best to say that *Tarsopsylla* has a vestigial frontal tubercle.

b) Legs. The tarsi of both species of *Tarsopsylla* show a remarkable sexual difference in their chaetotaxy (fig. 1): the males have long slender posterior setae at each 1st tarsal segment, while in the females these setae are short. The 1st segment of tarsus II has in the male about 8 slender bristles which are relatively longer than those of the two other 1st tarsal segments. The 2nd segment of tarsus III has a long apico-posterior seta which reaches to the middle of the 4th segment in the female and to the middle of the 5th segment in the male (Fig. 1).

c) Antepygidial bristles. As a rule, males of *Tarsopsylla* have 2, and the females 3 well-developed antepygidial bristles on each side of the posterior margin of the 7th tergum. Although there is a slight variation in the number of antepygidial bristles in many species of fleas, the variation in the females of *Tarsopsylla* seems to be higher than normal: 5 out of 35 mounted females of both species have on one or on both sides 4 antepygidial bristles instead of 3.

I am greatly indebted to Mr R. H. MULDER for collecting, preserving and well-labelling all ectoparasites he finds on mammals and on birds. One could only wish that his example of zealous collecting will be followed by more and more enthusiastic naturalists.

LITERATURE

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British Museum, The Zoological Museum, Tring (Herts.).
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Massavlucht van *Pachygaster atra* Panz. (Dipt. Stratiomyidae). Op 10 Juli 1949 en nog enkele daaropvolgende dagen vloog *Pachygaster atra* Panz. in groten getale langs de Kruislaan in Amsterdam (O.). De dieren zwermden op de manier van muggen op luwe plaatsen. Hoewel deze vlieg op verschillende plaatsen in ons land in enkele exemplaren verzameld werd, is een dergelijke massale vlucht hier bij mijn weten nog niet geconstateerd. SZILADY nam een soortgelijke vlucht waar in Bulgarije op een hete Julidag, terwijl VERRALL een massavlucht vermeldt, die hij waarnam in Chippenham Fen. De larve leeft in vermolmd iepenhout, zodat de door mij waargenomen dieren waarschijnlijk als larve geleefd hebben in de half vergane worteleinden van de zware iepen, die in de winter van 1944/45 bij de grond afgehakt werden.

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Stuifgif en insecten. Het alarmerende artikel van de heer STÄRCKE (Ent. Ber. 13 : 82) over de verarming van onze fauna door stuifgif deed me aanvankelijk de schrik om het hart slaan. Maar na enig nadenken geloof ik toch, dat er nog wel iets tegen in te brengen is.

Het is ongetwijfeld een feit, dat de goede jaren van grote vangsten op het ogenblik tot het verleden behoren. Maar is spuiten en stuiven de oorzaak hiervan? In 1949 noteerde ik van 1 Januari af elke vlindersoort, die dat jaar voor het eerst door mij werd aangetroffen. Op 14 Juni was ik slechts tot 67 soorten gekomen. Maar in 1950 heb ik er op dezelfde datum reeds 133 genoteerd. Ook is mij opgevallen, dat een dier als *Operophtera brumata* L., dat wel tot de meest bestreden vlinders behoort, de laatste jaren juist in zulk een overweldigend aantal optreedt. En ieder, die buiten woont, zal het wel met me eens zijn, dat dieren als de gewone kamervlieg nog even veelvuldig zijn als te voren.

Ik geloof, dat de oorzaak van de achteruitgang van de insectenstand in klimatologische omstandigheden ligt: 1947 veel te droog, 1948 te koud en te nat, 1949 eerst te koud, later te droog.

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