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A NEW SUBGENUS AND SPECIES OF THE CHIGGER MITE
GENUS *NEOTROMBICULA* (ACARI: TROMBICULIDAE)

BY A. A. STEKOL’NIKOV*

(Accepted September 1999)

**SUMMARY:** A new subgenus, *Iranotrombicula* n. subgen., is established within the chigger mite genus *Neotrombicula*. One new species, *Neotrombicula (Iranotrombicula) lazistanica* n. sp., is described from rodents collected in NE Turkey.

The genus *Neotrombicula* Hirst, 1925 has a rather complicated taxonomy. In the last revision of the "*Neotrombicula* complex" (Vercammen-Grandjean & Kolebinova, 1985) it included 11 subgenera and about 200 species. These authors regard as subgenera some taxa previously described as genera, for instance *Hirsutiella* Schluger & Ysotskaya, 1970 and *Ho.fmannina* Brennan & Jones, 1959. Several subgenera were based on only one character: thus, *Arctrombicula* Vercammen-Grandjean & Kolebinova, 1985 is characterized by branched galeala and *Anamasticula* Vercammen-Grandjean & Kolebinova, 1985 is characterized by the absence of mastitarsala III. Such taxonomic decisions increased the artificial nature of the genus (Kudryashova, 1998). Obviously, a classification based on the study of relatively small, but natural species groups would be more suitable in the taxonomy of *Neotrombicula*. The description of the genus *Eutonella* Kudryashova, 1988 is an example of this method.

The present paper is another step in this direction. It gives the description of a new subgenus in *Neotrombicula*, with 5 chigger mites species, parasitizing rodents in Iran and neighbouring countries. The new subgenus is distinguished by having 2 setae on coxae III, 2 genualae I, the characteristic form of the scutum, and the densely barbed dorsal idiosomal setae. I follow the terminology generally accepted in systematics of chiggers (Goff et al., 1982), with some modifications and additions: "ventral setae" (V) — setae on the ventral surface of idiosoma, excluding coxal and sternal setae; VS — number of ventral setae; D — dorsal idiosomal setae; Dm — mean length of D; DS — number of D; TaIII — length of leg III tarsus; TaW — width of leg III tarsus. All measurements are in micrometres (µm).

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Genus Neotrombicula Hirst, 1925
Subgenus Iranotrombicula n. subgen.
Diagnosis: SIF=7BS-B/N-3-(2-3)111,(1-0)000; fPp=B/B/BBB, B/B/NBB; fST=2.2; fCx=1.1.2 (in N. mofidi 1.1.1); PL>AL>AM (in N. lazistanica n. sp. AL<AM). Larvae of medium size, Ip=778–945. Scutum relatively small, subpentagonal or with rounded posterior margin, sparsely or moderately punctate. SB clearly anterior to level of PL bases. Sensillae flagelliform with branches on distal 2/3. Scutum and idiosomal setae of medium length (PL=43–64, H=40–67), densely covered with long barbs. One pair of humeral setae. Dorsal idiosomal setae arranged (6–8)-(6–8)-(6–9)-... Galeala branched or forked (nude in N. faghihi). 2 genualae I (3 in N. lazistanica n. sp.). Mastitarsala III present or replaced with barbed seta.

Type species: Neotrombicula sabzavari Kudryashova, 1977.
Hosts: Rodents.
Distribution: Turkey, Iran, Tadjikistan.

Neotrombicula (Iranotrombicula) lazistanica n. sp.
(Figs 1–9)
Diagnosis: SIF=7BS-B-3-3111.0000; fPp=B/B/NBB; fCx=1.1.2; fST=2.2; fSc: PL>AM>AL; Ip=879; fD=2H-6-6-6-6-6-2; DS=33; VS=35; NDV=68.

Description. Larvae. Idiosoma. Eyes 2 + 2, on ocular plate, anterior larger. One pair of humeral setae; 32–34 dorsal idiosomal setae, densely covering with rather thick and long barbs, arranged 6(7)–6(7)–6(7)–6(7)–2; 2 pairs of sternal setae and 31–41 ventral setae; total idiosomal setae 63–73. Gnatosoma. Cheliceral blade with tricuspid cap, gnathobase moderately punctate, bearing a pair of branched setae; galeala forked; palpal claw 3-pronged; setae on palpal femur and genu branched; palpal tibial setae: ventral seta branched, lateral seta forked, dorsal seta nude. Scutum. Moderately punctate, subpentagonal, with shallowly biconcave anterior margin; AM base posterior to level of AL bases; SB anterior to level of PL bases; PL>AL>AM; sensillae flagelliform with branches on distal 2/3, nude basally. Legs. All 7-segmented, terminating in a pair of claws and a clawlike empodium. Onychotriches absent. Leg I. Coxa with 1 branched seta (1B); trochanter 1B; basifemur 1B; telofemur 5B; genu 4B, 3 genualae, microgenuala; tibia 7B, 2 tibialae, microtibiala; tarsus 22B, tarsala, microtarsala, subterminala, paranubterminala, pretarsala. Leg II. Coxa 1B; trochanter 1B; basifemur 2B; telofemur 4B; genu 3B, genuala; tibia 6B, 2 tibialae; tarsus 16B, tarsala, microtarsala, pretarsala. Leg III. Coxa 2B; trochanter 1B; basifemur 2B; telofemur 3B; genu 3B, genuala; tibia 6B, tibiala; tarsus 15B, mastitarsala absent.

Standard measurements (N=6)

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Differential diagnosis: The new species is similar to N. mofidi and differs from it by the presence of 2 setae on coxae III (fCx=1.1.2 against 1.1.1 in N. mofidi), longer scutal and idiosomal setae (AM=48–59 against 23–26, PL=50–64 against 43–47, H=55–67 against 40–45 in N. mofidi), slightly shorter tarsus III (TaIII=72–79 against 85–88 in N. mofidi) and slightly broader scutum (AW=68–73, PW=87–95, SB=30–32.
FIGS 1-4: Neotrombicula lazistanica n. sp., holotype larva.

1. — Dorsal idiosomal seta of first row. 2. — Scutum. 3. — Arrangement of dorsal idiosomal setae. 4. — Arrangement of ventral idiosomal setae.

against 62–66, 82–85 and 27–28 respectively). The new species differs from all other Iranotrombicula by the presence of 3 genuæalæ on leg I and by AM longer than AL.

Hosts: Microtus majori Thomas, Apodemus fulvipectus Ognev.

Type data and additional material: Holotype (4654, T-Tr.-12) and 3 paratypes, NE Turkey, Artvin Province, East Ponticus Chain (Dogu Karadeniz Daglari), Gül Mt. (East of Kaçkar Mt.), 2400 m, 24 June 1998, from Microtus majori, A. A. STEKOL’NIKOV coll.; 1 specimen, 25 June 1998, from Apodemus fulvipectus, 2750 m, other data same; 2 specimens, NE Turkey, Trabzon Province, Zigana Range (Kalkanli Daglari), 2050 m, 10 June 1998, from M. majori, A. A. STEKOL’NIKOV coll.

The holotype and paratypes of the new species are deposited in the Zoological Institute of the Russian Academy of Science, Saint Petersburg (ZIN).
FIGS 5-9: Neotrombicula lazistanica n. sp., larva.

**Neotrombicula (Iranotrombicula) faghihi**
Kudryashova, 1973

**KUDRYASHOVA, NERONOV & FAHRANG-AZAD, 1973: 130**, fig. 1 (holotype and paratypes in Zoological Museum of Moscow University—ZMMU).

**Diagnosis:** SIF=7BS-N-3-2111.1000; fPp=B/B/NBB; fCx=1.1.2; fSt=2.2; fSc: PL>AL>AM; Ip=914; fD=2H-8-8-6-4-6(4)-2; DS=34-36; VS=38-41; NDV=72-77.

**Hosts:** Cricetus migratorius (Pallas), Tatera indica Hardwicke.

**Material examined:** Holotype and 1 paratype, Iran, Fars Province, 48 km S of Fasa, 28 Nov. 1969, from Tatera indica, V. M. NERONOV coll.


**Neotrombicula (Iranotrombicula) mofidi**
Kudryashova, 1973


**Diagnosis:** SIF=7BS-B-3-2111.0000; fPp=B/B/BBB; fCx=1.1.1; fSt=2.2; fSc: PL>AL>AM; Ip=899; fD=2H-6-6-6-4-(4-6)-(2-3); DS=32; VS=37; NDV=69. Mastitarsala absent.

**Material examined:** Holotype and 3 paratypes, Iran, Markazi Province, 16 km N of Delijan, 1600 m, 14 October 1969, from Meriones persicus (Blanford), V. M. NERONOV coll.


**Neotrombicula (Iranotrombicula) sabzavari**
Kudryashova, 1977

**KUDRYASHOVA, 1977:** 50, fig. 3 (holotype and 2 paratypes in ZMMU).

**Diagnosis:** SIF=7BS-B-3-2111.1000; fPp=B/B/BBB; fCx=1.1.2; fSt=2.2; fSc: PL>AL>AM; Ip=929; fD=2H-(7-8)-8-(7-9)-(6-7)-6(4)-...; DS=42; VS=52; NDV=94.

**Material examined:** Holotype and 2 paratypes, Iran, Khorasan Province, 137 km SE of Sabzevar, 1200 m, 9–14 Oct. 1970, from Meriones lybicus (Lichtenstein), V. M. NERONOV coll.

**Neotrombicula (Iranotrombicula) subtilis**
Schluger & Kudryashova, 1969

**SCHLUGER & KUDRYASHOVA, 1969: 117**, fig. 8–14, table 1 (holotype and paratypes in ZMMU).

**Diagnosis:** SIF=7BS-B-3-2111.1000; fPp=B/B/BBB; fCx=1.1.2; fSt=2.2; fSc: PL>AL>AM; Ip=783; fD=2H-8-7-6-4-2-2, 2H-8-8-7-5-4-1; DS=35; VS=39; NDV=76. Scutum small, posterior margin rounded. Sensillae flagelliform with branches on distal 2/3 and several small barbs on proximal part.

**Material examined:** 2 paratypes, Tadjikistan, Gisarskij Range, Romit Reserve, 27 April 1967, from Apodemus sylvaticus (L.), N. I. KUDRYASHOVA coll.

**KEY TO LARVAE OF Iranotrombicula n. subgen.**

1(4) Mastitarsala absent; fD=2H-6-6-6-...

2(3) fCx=1.1.1; AL>AM; 2 genualae I  

3(2) fCx=1.1.2; AL<AM; 3 genualae I  

4(1) Mastitarsala present; at least in anterior 2 rows of D number of setae is 7-8.

5(6) Galeala nude; fPp=B/B/NBB  

6(5) Galeala branched; fPp=B/B/BBB

7(8) Scutum with rounded posterior margin; AW=58–59, PW=77–80, SD=49, NDV=70–78, TaIII=70–72.  

8(7) Scutum subpentagonal; AW=63–68, PW=81–85, SD=53–56, NDV=84–106, TaIII=86–89

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