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REVISION OF THE GENUS *EUTROMBICULA* EWING 1938

(ACARINA : TROMBICULIDAE)

BY

P. H. VERCAMMEN-GRANDJEAN 2 & J. R. AUDY 3

I. INTRODUCTION.

The genus *Novotrombicula* was created by Womersley and Kohls (1947) for the single specimen *N. owiensis* found by G. M. Kohls "on ground at base of a large tree" (quotation from label on slide) on Owi Island, New Guinea, 15 August, 1944 (30). This new genus was considered unusual because of its peculiar elongate scutum, which at that time was generally considered to be a characteristic of the Gahrliepiinae.

In 1956 Vercammen-Grandjean discovered another species of Trombiculinae also possessing an elongate scutum, but differing from *Novotrombicula* in its clavate sensillae and palpal-tarsus formula $fT = 6B$ (the $fT$ of both *Novotrombicula* and *Eutrombicula* being 7B.S). This last species was placed in a new subgenus, *Elianella*, genus *Ascoschoengastia* (21). In 1960 Vercammen-Grandjean considered *Novotrombicula* as a subgenus of the genus *Eutrombicula* because it did not differ from the other *Eutrombicula* except in its elongate scutum (23).

In 1959 Fauran described his *Trombicula rotundiscutata* which is quite peculiar in its elongate scutum (although not so elongate as in *N. owiensis*) (II).

In fact, many species belonging to the subgenus *Siseca*, of the genus *Eutrombicula*, possess scuta with partly elongate posterior margins, but these are never so considerably developed as that of *T. rotundiscutata* (A, fig. 1).

*T. rotundiscutata* belongs indisputably to the *Novotrombicula* complex (A, fig. 3). To establish the true systematic position of *owiensis* and *rotundiscutata*, a revision of the genus *Eutrombicula* according to Vercammen-Grandjean's essay on classification of 1960 is appropriate. In that classification, the six following subgenera were included:


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2. Research Parasitologist, the George Williams Hooper Foundation, University of California Medical Center, San Francisco 22, California, U.S.A.
3. Director, George Williams Hooper Foundation.


In a recent revision, Vercammen-Grandjean (1965) (24) gave *Vatacarus* full generic status, including the very closely related *Babiangia* and a new subgenus: *Iguanacarus*. Nevertheless, he continues to consider *Vatacarus* extremely close to *Eutrombicula* and originating from a common stem.

![Genus Eutrombicula - Scutum studies.](image)
As a consequence, the genus *Eutrombicula* as now understood contains the four following subgenera:

A. *Eutrombicula* Ewing, 1938.
B. *Siseca* Audy, 1956.

II. Classification.

Genus *Eutrombicula* Ewing, 1938.

(A, fig. 1-3)


=Eutrombicula (Squamicola) Audy & V.-G., 1961 (4), in part...

Diagnosis: Trombiculini of large size, possessing well-sclerotized and wide, densely punctate scutum with anterolateral "shoulders", and sensilla bases somewhat distant from each other; scutal ectostracum sometimes partly pleated (stria-tions); sensillae with apical branches. Bi-ocellate eyes always present. Palpotibial claw bifurcate; palpal-tarsal formula: \( fT = 7B.S \); galeal setae nude. Always at least two genualae 1, one genuala 2 and 3 and one tibiala 3 on the legs; mastitarsala 3 usually present and nude, sometimes provided with sparse, inconspicuous barbs on its base.


Hosts: arthropods, reptiles, birds and mammals.

A. Subgenus *Eutrombicula* Ewing, 1938.


=Acariscus Ewing, 1943 (9).


1. *Squamicola* Audy & V.-G., 1961 (type = *Eutrombicula agamae* Lawrence, 1949) is a synonym of *Eltonella* Audy, 1956 (23) (24').
Diagnosis: Eutrombicula of medium to large size; scutum wider than long, with sensillary bases rather widely separated from each other, sparsely to heavily punctate, sometimes striated; genuae on leg 1: ga = 2 or 3.

Genus type: Microthrombidium alfreddugesi Oudemans, 1910.

Hosts: arthropods, amphibians, reptiles, birds and mammals.

List of known species:

Eutrombicula Ewing, 1938:

ablephara, Tromb.; Womersley, 1952
alfreddugesi, Microthrombidium; Oudemans, 1910
batatas, Acarus; Linné, 1758
belkini, Eutr.; Gould, 1950
goldii, Microthrombidium; Oudemans, 1910
gurneyi, Tromb.; Ewing, 1937
hirsti, Tromb.; Sambon, 1927
japa, Leptus; Ribeyro & Bambaren, 1922
kansasensis, Tromb.; Loomis, 1955
kohlsi, Tromb.; Womersley, 1944
lipovskyana, Tromb. (Eutr.); Wolfenbarger, 1952
lygosomoides, Tromb.; Womersley, 1952
macropus, Tromb.; Womersley, 1936
multisetosa, Acariscus; Ewing, 1943
pacae, Tromb. (Eutr.); Floch & Fauran, 1957
psittaci, Tromb.; Floch & Fauran, 1957
reptilis, Eutr.; V.-G.,
río, Tromb.; Gunther, 1939
samboni, Tromb.; Womersley, 1939
sarcina, Tromb.; Womersley, 1952
scincoides, Tromb.; Womersley, 1944
sobrina, Tromb.; Womersley, 1952
splendens, Tromb.; Ewing, 1913
storkani, Tromb.; Daniel, 1955
sulae, Microthrombidium; Oudemans, 1910
tinami, Microthrombidium; Oudemans, 1910
tovelli, Tromb. (Neotr.); Womersley, 1952
wichmanni, Tromb.; Oudemans, 1905

(See list of abbreviations p. 293)


(B, figs. 1-6)

=Eutrombicula alfreddugesi (Oudemans, 1910) in part (17), Ewing, 1944 (9), Jenkins, 1948 (15).
=Trombicula (Eutrombicula) alfreddugesi (Oudemans, 1910) in part (17), Jenkins, 1949 (16).

a) Description 1:

1) Measurements: of the one specimen seen compared with those given by Gould in 1956.

<table>
<thead>
<tr>
<th>Spec. seen:</th>
<th>AW</th>
<th>PW</th>
<th>SB</th>
<th>ASB</th>
<th>PSB</th>
<th>SD</th>
<th>AP</th>
<th>AM</th>
<th>AL</th>
<th>PL</th>
</tr>
</thead>
<tbody>
<tr>
<td>After Gould:</td>
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<tr>
<td>Del Norte Co.</td>
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<td>87</td>
<td>38</td>
<td>23</td>
<td>32</td>
<td>55</td>
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<tr>
<td>Kern Co.</td>
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<td>38</td>
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<tr>
<td>Riverside Co.</td>
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<td>Santa Cruz Co.</td>
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<td>54</td>
<td>25</td>
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<tr>
<td>Trinity Co.</td>
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<td>83</td>
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<td>22</td>
<td>27</td>
<td>49</td>
<td>23</td>
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<td>Ventura Co.</td>
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<table>
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<th>D</th>
<th>V</th>
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<th>pm</th>
<th>pp</th>
<th>Ip</th>
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<td>26</td>
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<td>Kern Co.</td>
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<td>83</td>
<td>33</td>
<td>21</td>
<td>27</td>
<td>48</td>
<td>24</td>
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</tr>
<tr>
<td>Los Angeles Co.</td>
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<td>86</td>
<td>36</td>
<td>24</td>
<td>25</td>
<td>49</td>
<td>23</td>
<td>36</td>
</tr>
<tr>
<td>Marin Co.</td>
<td>75</td>
<td>91</td>
<td>42</td>
<td>27</td>
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<td>48</td>
<td>24</td>
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<tr>
<td>Riverside Co.</td>
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<td>Santa Cruz Co.</td>
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<td>24</td>
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<td>30</td>
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<tr>
<td>Trinity Co.</td>
<td>71</td>
<td>83</td>
<td>34</td>
<td>22</td>
<td>27</td>
<td>49</td>
<td>23</td>
<td>28</td>
</tr>
<tr>
<td>Ventura Co.</td>
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<td>81</td>
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<td>23</td>
<td>23</td>
<td>46</td>
<td>20</td>
<td>33</td>
</tr>
</tbody>
</table>

2) Dorsal side: Large species; scutum (B, fig. 1) sparsely punctate and almost entirely covered with epicuticular (ectostracal) pleats; sensillary bases situated rather far from each other; posterior margin very convex, much more so than is that of E. reptilis (the following species); one pair of eyes on each side of the scutum, posterior lens apparently not functional; sensilla bare on the proximal 26 μ, about 12 fine branches on the distal 36 μ. Five scutal setae covered with fine barbs. Dorsal setae arranged as follows: fD = 2H + 6.6.4.2.2 = 22.

3) Ventral side: Uropore between the setae of the third and fourth rows; fV = 2.4.4.2 = 10 ventral setae; NDV = 22 + 10 = 32 body setae.

4) Legs: fsp = 7.7.7. Two accessory semi-bars on tarsus 1 and 1 semi-bar on tarsus 2, fBt = b.sb.sb—b.sb—b. Coxal and sternal setae heavily branched (plumose): fCx = 1.1.1 and fSt = 2.2. Genualae and tibiala formulae: ga = 2 (B, fig. 6), gm = 1, gp = 1 and tp = 1. An elongate, slender but branched seta situa-

1. The redescription of belkini, together with the closely related alfreddugesi the most important American species of Eutrombicula, is included for purposes of comparison with reptilis n. sp. from Africa.
ted middorsally on tarsus 3 might be considered a mastitarsala. Solenidion on tarsus 1 thick and short (12 μ) (fig. 4); solenidion on tarsus 2 narrower, but nearly as short as S1 (13 μ) (fig. 5).

5) Gnathosoma: (B, figs. 2 & 3). Galeal setae nude and slender; chelicerae long, provided with a sharp, tricuspid cap with a posterior elongate hook. Strong palps with a robust, bifurcate tibial claw.
Palpal formula: \( fPp = (B) - (B) - (B).N.B.G_2 - E.B.B.B.S.B.(B).(B).(P) \) and \( fT = 7B.S. \) Gnathobase and coxae are slightly striated.

_Eutrombicula belkini_ Gould, 1950. _Eutrombicula reptilis_ n.sp.
b) **Type locality**: Palos Verdes Estates, Los Angeles Co., California.

c) **Type host**: *Perognathus californicus*.

d) **Specimen seen**: (Paratype G 67) was found on "man" by Dr. Gould 27 August, 1949 in Palos Verdes Estates, Los Angeles Co., California.

e) **Other records**:

<table>
<thead>
<tr>
<th>No.</th>
<th>Host</th>
<th>Date</th>
<th>Locality</th>
<th>No. spec.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>« common brown lizard »</td>
<td>Ewing, 1944</td>
<td>Lake Co.</td>
<td>—</td>
</tr>
<tr>
<td>2</td>
<td><em>Cnemidophorus tesselatus</em></td>
<td>IV-12-50</td>
<td>Riverside Co.</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td><em>Geococcyx californianus</em></td>
<td>Ewing, 1944</td>
<td>Riverside Co.</td>
<td>—</td>
</tr>
<tr>
<td>4</td>
<td><em>Gerrhonotus multicarinatus</em></td>
<td>IX-28-48</td>
<td>Contra Costa Co.</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>« ground »</td>
<td>Gould, 1950</td>
<td>Palos Verdes Est.</td>
<td>5 (Pt.)</td>
</tr>
<tr>
<td>6</td>
<td><em>Homo sapiens</em></td>
<td>Gould, 1950</td>
<td>Palos Verdes Est.</td>
<td>1 (Pt.)</td>
</tr>
<tr>
<td>7</td>
<td><em>Marmota flaviventris</em></td>
<td>VI-24-49</td>
<td>Lassen Co.</td>
<td>1</td>
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<tr>
<td>8</td>
<td><em>Meleagris gallopavo</em></td>
<td>VI-20-38</td>
<td>Solano Co.</td>
<td>1</td>
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<tr>
<td>9</td>
<td><em>Mus musculus</em></td>
<td>IX-2-49</td>
<td>Marin Co.</td>
<td>1</td>
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<tr>
<td>10</td>
<td><em>Perognathus californicus</em></td>
<td>VIII-26-50</td>
<td>Monterey Co.</td>
<td>1</td>
</tr>
<tr>
<td>11</td>
<td><em>Peromyscus truei</em></td>
<td>VIII-1-50</td>
<td>Monterey Co.</td>
<td>1</td>
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<tr>
<td>12</td>
<td><em>Phrynosoma coronatum blainvilli</em></td>
<td>V-30-41</td>
<td>Kern Co.</td>
<td>1</td>
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<tr>
<td>13</td>
<td><em>P. c. frontale</em></td>
<td>Gould, 1950</td>
<td>Ventura Co.</td>
<td>7 (Pt.)</td>
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<td>14</td>
<td><em>Sceloporus graciosus</em></td>
<td>VII-12-50</td>
<td>Plumas Co.</td>
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<td><em>S. o. occidentalis</em></td>
<td>VII-II-35</td>
<td>Del Norte Co.</td>
<td>11</td>
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<tr>
<td>16</td>
<td><em>S. o. occidentalis</em></td>
<td>V-30-41</td>
<td>Marin Co.</td>
<td>1</td>
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<tr>
<td>17</td>
<td><em>S. o. occidentalis</em></td>
<td>VI-26-43</td>
<td>Trinity Co.</td>
<td>3</td>
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<tr>
<td>18</td>
<td><em>S. (sp. ?)</em></td>
<td>VIII-15-45</td>
<td>Santa Cruz Co.</td>
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<td>19</td>
<td><em>S. (sp. ?)</em></td>
<td>IX-12-46</td>
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<td>20</td>
<td><em>Uta stansburiana</em></td>
<td>?</td>
<td>Los Angeles Co.</td>
<td>3</td>
</tr>
</tbody>
</table>

2. **Eutrombicula (Eutrombicula) reptilis** n. sp.

(B, figs. 7-14)

a) **Description**:

1) **Measurements**: mean of 20 specimens, holotype included.

<table>
<thead>
<tr>
<th>AW</th>
<th>PW</th>
<th>SB</th>
<th>ASB</th>
<th>PSB</th>
<th>SD</th>
<th>AP</th>
<th>AM</th>
<th>AL</th>
<th>PL</th>
<th>S</th>
<th>H</th>
<th>D</th>
<th>V</th>
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<th>pm</th>
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<th>lp</th>
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<tbody>
<tr>
<td>70</td>
<td>84</td>
<td>35</td>
<td>22</td>
<td>22</td>
<td>24</td>
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<td>45</td>
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<td>29/27</td>
<td>24/27</td>
<td>277</td>
<td>228</td>
<td>250</td>
<td>755</td>
<td></td>
</tr>
</tbody>
</table>

2) **Dorsal side**: Medium to large species; scutum sparsely punctate and striated on its posterior margin. Anteromedian seta shorter than the antero-laterals, which are very slightly shorter than the PLs; humerals longer than the longest scutal setae (PLs). One pair of eyes on each side of the scutum (B, fig. 7). \[ JD = 2H + 8.6.4.4.2 = 26 \text{ dorsal setae.} \] The dorsal setae, like the scutal, have slightly blunt tips and are covered with numerous short barbs.
3) Ventral side: Uropore between the third and fourth row of ventral setae. 
\[ fV = 2.4.2.2.2.2 = 14 \] and \[ NDV = 26 + 14 = 40 \] body setae.

4) Legs: \( fsP = 7.7.7 \). Genualae and tibiala formulae: \( ga = 2, gm = 1, gp = 1 \) and \( tp = 1 \). The posterior genuala is displaced distally in relation to the two neighboring setae (B, fig. 13). Solenidion of tarsus 1 strong and longer than that of \textit{belkini} (B, fig. 11); solenidion of tarsus 2 only slightly longer than the homologous one of \textit{belkini}. On leg 3 one can find two long whip-like, nude mastitarsalae and one mastitibiala situated dorsally, slightly in front of the usual tibiala.

5) Gnathosoma: Galeal setae nude and relatively short. Cheliceral blades long and strong, as shown on B, figs. 9 & 10 (dorsal view). Palpal claw bifurcate, not so strong as that of \textit{E. belkini}. Gnathosomal plate sparsely punctate, as are also the anterior coxae in contrast to the median coxae (B, fig. 14).

\[ fPP = (B) - (N) - (N).B_2.B.G_2 - E.B.B.B.S.B.(B).(B).(P) \] and \( fT = 7B.S. \)

b) Host and parasitope: Type host: \textit{Lacerta muralis}, under the scales on the basal inch of the tail (collector Dr. J. Brunneau, Inst. Pasteur, Morocco, Casa- blanca).

c) Other records: \textit{Agama bibroni}, \textit{Tarentola mauritanica} and \textit{Psammodromus algerus}.

d) Locality and date: Casablanca (Morroco), 11 May, 1956.

e) Type material: Holotype no. 11556/E/1 deposited in the Musée d’Afrique Centrale, Tervuren, Belgium; 100 paratype specimens numbered from 11556/E/2 to 101.

B. Subgenus \textit{Siseca} Audy, 1956.

(A, fig. 1-2)

\( = \textit{Eutrombicula} \) (Siseca), V.-G., 1960 (23).

Diagnosis: \textit{Eutrombicula} s. lat., with a large, square, heavily punctate scutum; somewhat elongate posterior margin; anterior margin resembling shoulders; sensillary bases widely separated, near the ALs.

Genus type: \textit{Trombicula rara} Walch, 1923.

Hosts: Ordinarily on reptiles, one species on Arthropoda.

N.B.: The subgenera \textit{Siseca} and \textit{Novotrombicula} are very closely related. \textit{Trombicula rotundiscutata} Fauran, 1959 (redescribed later in this work) constitutes an unquestionable link. Nevertheless, for reason of clarity, it seems desirable to leave the two groups separated.
List of known species:

Siseca Audy, 1956:

- *lundbladi*, Tromb.; Womersley, 1952
- *rara*, Tromb.; Walch, 1923
- *southcotii*, Siseca; Womersley & Audy, 1957
- *subrara*, Tromb.; Audy, 1950
- *thori*, Tromb.; Womersley, 1952
- *vandiemeni*, Siseca; Domrow, 1962

(See list of abbreviations p. 14)


(A, fig. 1-3; C & D)


= *Eutrombicula* (Novotrombicula), V.-G., 1960 (23).

Diagnosis: *Eutrombicula* s. lat., with a large, heavily punctate scutum, elongate posteriorly, with anterior shoulders; sensillary bases very widely separated, between Als and PLs; large cheliceral blades.


(A, fig. 1-3; C)


a) Description:

1) Measurements: (in micra) one paratype:

<table>
<thead>
<tr>
<th>AW</th>
<th>PW</th>
<th>SB</th>
<th>ASB</th>
<th>PSB</th>
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<th>H</th>
<th>H'</th>
<th>D</th>
<th>V</th>
<th>pa</th>
<th>pm</th>
<th>pp</th>
<th>Ip</th>
</tr>
</thead>
<tbody>
<tr>
<td>90</td>
<td>100</td>
<td>61</td>
<td>13</td>
<td>113</td>
<td>126</td>
<td>20</td>
<td>38</td>
<td>28</td>
<td>44</td>
<td>20</td>
<td>70</td>
<td>49</td>
<td>31/25</td>
<td>23/24</td>
<td>274</td>
<td>236</td>
<td>260</td>
<td>770</td>
<td></td>
</tr>
</tbody>
</table>

2) Dorsal side: large species, scutum densely punctate and elongate with two body setae inserted on its posterior margin (seven scutal setae); sensillae fairly long provided with short barbs on their entire lengths; sensillary bases widely separated; antero- and posterolateral setae situated close to one another; AL slender and shorter than AM and PL, PL > AM > AL; the 2 post-PLs are very
Eutrombicula (Novotrombicula) owiensis (Wom. & Kohls, 1947).

short and slender. Scutal setae and body setae are covered with numerous, strong barbs. Two pairs of humerals: \( H \) and \( H' \); \( H' \), situated near the scutal margin the strongest and longest dorsal setae; 
\[
f_D = 2(2H) + 2.4.4.2.2 = 18 \text{ dorsal setae.}
\]

3) **Ventral side**: Uropore between the setae of the first and second rows; 
\[
f_V = 4.4.4 = 12 \text{ ventral setae. NDV = 18} + 12 = 30 \text{ body setae.}
\]

4) **Legs**: Leg segmentation formula: 
\[
f_sp = 7.7.7.
\]
Coxal and sternal formulae: 
\[
f_Cx = 1.1.1 \text{ (heavily branched setae), } f_St = 2.2.
\]
Genualae and posterotibiala formulae: 
\[
g_a = 3, g_m = 1, g_p = 1 \text{ and } t_p = 1.
\]
One mastitarsala 3 with short barbs. Subterminala and parabasalpala present on tarsi 1; the 2 tarsal basal solenidions (\( S_1, S_2 \)), short and thick. One pretarsala present on tarsi 1 and 2.

5) **Gnathosoma**: Galeal setae nude; cheliceral blades strong and long (60 \( \mu \)). Palpal formula: 
\[
f_Pp = (B) — (B) — (N).N.N.Gr_2 — E.B.B.B.S.B.(B).B.(P), \text{ and } f_T = 7B.S.
\]

b) **Host and parasitope**: Host unknown, collected by G. M. Kohls “from the soil at the base of a large tree”.

c) **Locality and date**: Owi Island, New Guinea, 15 August, 1944.

2. **Eutrombicula (Novotrombicula) rotundiscutata** (Fauran, 1959).

\[
(A, \text{ fig. } 1-3; D)
\]

\textit{= Trombicula (Trombicula) rotundiscutata Fauran, 1959 (II).}

Since Fauran’s species possesses all of the characteristics of the subgenus Novotrombicula, it is evident that it belongs to this group.

a) **Description**:

1) **Measurements**: one paratype compared with the means given by Fauran in 1959.

\[
\begin{array}{cccccccccccc}
& AW & PW & SB & ASB & PSB & SD & AP & AM & AL & PL \\
\text{After Fauran} & 68 & 93 & 55 & 26 & 70 & 96 & 34 & 45 & 32 & 48 \\
\text{Paratype seen} & 64 & 81 & 54 & 23 & 66 & 89 & 34 & 46 & 35 & 44 \\
\text{S} & H & H' & D & V & \text{pa} & \text{pm} & \text{pp} & \text{Ip} & \\
\text{After Fauran} & 53 & 45 & 50 & 50/30 & — & — & — & — & \\
\text{Paratype seen} & 55 & 41 & 48 & 46/36 & 30/39 & 257 & 232 & 253 & 742 & \\
\end{array}
\]

2) **Dorsal side**: Large species with densely punctate scutum, less expanded posteriorly than that of owiensis, and without inclusion of any extra body-setae; sensillary bases far from each other, sensillae bearing short, fine barbs on their entire lengths. Two pairs of ocular lenses on each side of the scutum. As in owiensis, there are 2 pairs of humeral setae: \( H \) and \( H' \), \( H' \) being topographically external to \( H' \). 
\[
f_D = 2(2H) + 10.8.8.6.4.2 = 42 \text{ dorsal setae.}
\]
Eutrombicula (Novotrombicula) rotundiscutata (Fauran, 1959)
3) Ventral side: Uropore situated between the third and fourth setal rows. 
\[ fV = 8.6.6.6.6.4 = 36 \] ventral setae.

4) Legs: \( fsp = 7.7.7 \); tarsi 1 and 3 provided with 3 bars or sclerotized internal rings; tarsus 2 with 1 bar and 1 semi-bar (sclerotized half-ring); posterior tarsus with 3 complete rings, the 2 distal being confluent: \( fBT = 3b - bsb - 3b \). Subterminala, parasubterminala and pretarsala present on tarsi 1 and 2; solenidions short and thick \( (S_1 \text{ and } S_2) \). The coxal and sternal formulae are the same as for \textit{oviensis}: \( fCx = 1.1.1 \) and \( fSt = 2.2 \), all heavily barbed hairs. Genualae and posterotibiala formulae: \( ga = 3, gm = 1, gb = 1 \) and \( tp = 1 \). Mastitarsala 3 like that of \textit{oviensis}.

5) Gnathosoma: Galeal setae nude, cheliceral blades strong and long \((51 \mu)\). Palps bearing a bifurcate tibial claw and showing the following formula: 
\[ fPp = (B) - (B) - (B), \text{N.B.Gr}_a - \text{E.B.B.B.S.B.(B).B.(B)}, \text{and } f/T = 7B.S. \]

b) Host and parasitope: \textit{Cuniculus paca}, in the ears.

c) Locality and date: Near the airport of Cayenne-Rochambeau, French Guinea (S. America), 9 August, 1957.

d) Type material: Holotype at the National Museum of Natural History, Paris.


\( (A, \text{fig. } 1) \)


= \textit{Eutrombicula (Blanciella)} V.-G., 1960 (23).

\textbf{Diagnosis:} \textit{Eutrombicula} s. lat., scutum as in \textit{Eutrombicula} s. str.; only one genuala on leg 1 and no genualae at all on legs 2 and 3.

N. B.: The absence of genualae on legs 2 and 3 constitutes an important character and is restricted to a very small number of genera: \textit{Euschoengastia}, \textit{Helenicula}, \textit{Euschoengastioides}.

\textit{Genus type:} \textit{Eutrombicula (Eutrombicula)} \textit{deschiensi} V.-G., 1956 (22), single species known.

\textit{Host}: rodent, in Morocco (N. Africa).

\textit{Addenda:} The two genera \textit{Alexfainia} and \textit{Vergrandia}, both described from bats by Yunker and Jones in 1961, except for their peculiar single-pronged palpal claws, possess all the basic characters of true \textit{Eutrombicula}. Nevertheless their precise taxonomic position requires additional investigation.
Abbreviations used in lists of species pp. 283, 288:

Column 1 — D = after author's description
S = material seen
U = unpublished, new species

Column 2 — A = Australian, As = Austral. south, At = Austral. tropical
E = Ethiopian, Ew = E. west
NT = Neotropical, NTc = N. central
O = Oriental, Om = O. malaysian
P = Palearctic, Pe = P. european, Pm = P. mediterranean
S = Sonoran

Column 3 — M = Mammals, Mr = M. rodent, Mch = M. chiroptera
B = Birds
H = Batrachians, Reptiles (Herpeton)
A = Arthropods.

BIBLIOGRAPHY


