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Previous volumes (2010-2018): 250 € / year (4 issues)
Acarologia, CBGP, CS 30016, 34988 MONTFERRIER-sur-LEZ Cedex, France
ISSN 0044-586X (print), ISSN 2107-7207 (electronic)

The digitalization of Acarologia papers prior to 2000 was supported by Agropolis Fondation under
the reference ID 1500-024 through the « Investissements d’avenir » programme
(Labex Agro: ANR-10-LABX-0001-01)

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TWO TROMBICULIDAE OF VIVERRINA OF TRANSVAAL

BY

P. H. VERCAMMEN-GRANDJEAN

Dr. F. Zumpt, Department of Entomology, South African Institute for Medical Research, Johannesburg (South Africa) was kind enough to send us several collections of African trombiculids found on various hosts. We wish to thank him for his generous contribution.

In July, 1964, Dr. Zumpt collected on a Cynictis penicillata, captured in Mafeking, Transvaal (South Africa), several specimens belonging to two different species of trombiculids.

One of those chiggers is a sub-species of Microtrombicula cynictia (Radford, 1942). The other belongs to a new genus that we are dedicating to our esteemed colleague, Dr. Zumpt. The full names of those two species described below are:

a) *Microtrombicula cynictia mafekingi* n.ssp.

b) *Zumptrombicula cynictia* n.g., n.sp.

I. Microtrombicula cynictia mafekingi n.ssp.

(figs 1-6)

A. DESCRIPTION.

1) **Measurements**: Means, in micra, of three specimens, the holotype and two paratypes (m), compared with those of *Trombicula cynictia* Radford, 1942 (c):

<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>S</th>
<th>H</th>
<th>D</th>
<th>P</th>
<th>V</th>
<th>pa</th>
<th>pm</th>
<th>pp</th>
<th>Ip</th>
</tr>
</thead>
<tbody>
<tr>
<td>(m)</td>
<td>42</td>
<td>54</td>
<td>18</td>
<td>30</td>
<td>24</td>
<td>54</td>
<td>28</td>
<td>31</td>
<td>24</td>
<td>35</td>
<td>66</td>
<td>38</td>
<td>32/30</td>
<td>32</td>
<td>22/29</td>
<td>231</td>
<td>186</td>
</tr>
<tr>
<td>(c)</td>
<td>42</td>
<td>51</td>
<td>17</td>
<td>24</td>
<td>23</td>
<td>47</td>
<td>25</td>
<td>28</td>
<td>23</td>
<td>32</td>
<td>50</td>
<td>37</td>
<td>31/30</td>
<td>27</td>
<td>22/28</td>
<td>207</td>
<td>177</td>
</tr>
</tbody>
</table>

2) **Scutum** (fig. 2): Subtrapezoidal with verrucous surface between ALs and PLs, with prominent anterior shoulders and tri-convex margin. All scutal setae straight with few thin barbs; AM > PL > AL; AM base before the ALs line. Sensilla bases well separated; sensilla flagelliform, slender and entirely nude. Eyes reduced to one pair of small lenses (diam. 5 μ).

1. This work was supported by PHS Research Grant Al-3793 from the National Institute of Allergy and Infectious Diseases, U. S. Public Health Service.

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

Acarologia, t. IX, fasc. 1, 1967.
3) *Idiosoma*: Body setae with sparse barbs as in fig. 6:

\[
\begin{align*}
\text{fD} &= 2H + 8.6.4.6.4.4.2 = 36 \\
\text{fV} &= 6.6.6.4.6.4.4.2 = 40 \\
\text{NDV} &= 36 + 40 = 76 \\
\end{align*}
\]

The body setae formula of *cyntictia cynictia* is:

\[
\begin{align*}
\text{fD} &= 2H + 9.8.6.4.4.4. = 40 \\
\text{fV} &= 4.6.6.6.6.4.4.2 = 44 \\
\text{NDV} &= 40 + 44 = 84 \\
\end{align*}
\]

The body setae barbs are slightly denser in *cyntictia cynictia*. Uropore between rows 6 and 7 of ventral setae in both sub-species.

4) *Legs* (figs 3, 4, 5 & 6): Show a small species, Ip = 638, but larger than *cyntictia cynictia* (Ip = 584). fsp = 7:7:7; fCx = B3.N*N.B (in *cyntictia cynictia* fCx = B3.N.B) ; fSt = 2B3.2N (same as in *cyntictia cynictia*).

All dorsal leg setae possess only few barbs (4-t barbs); only two apical genualae on leg one; one genuala on each leg 2 and 3 and one tibiala on leg 3 (ga = 2, gm = 1, gp = r, and tp = r). Long nude mastitarsala near the base of the article (MT = 1). Nude subterminala, parasubterminala and pretarsalae r and 2 present (ST, pST, PT*, PT" = N). fBT = b.2sb/b.2sb/b.

5) *Gnathosome* (fig. 1): Short cheliceral blades with tricuspid cap and blunt subapical tooth. Gnathobase small with prominent internal apophysis.

\[
\begin{align*}
\text{fPP} &= (B)-(B)-(B)N.B. \\
\text{Galeala nude (Ga = N).} \\
\text{Palpotibial claw bifid (Gr = 2).} \\
\text{fT} &= 6B.
\end{align*}
\]

6) *Synthetic identification formula*: according to V-G's 1960 chart, SIF = 6B-N-2-2111.1000.

B. Location & Date: Mafeking, Transvaal, South Africa; July, 1964.

C. Host: *Cynictis peniculata* (Viverridae).

D. Type Material: Holotype # L : 764/B/1 in U.S. National Museum.

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II. *Zumptrombicula* n.g.

Type Species: *Zumptrombicula cynictia* n.g., n.sp.

Diagnosis: SIF = 6B-N-3-1001.2100.

*TROMBICULINI* of medium size, Ip = 605. Punctate peniscutum, deriving obviously from normal pentagonal scutum. AM slightly in front of ALS line. Sensilla branched on distal half, peduncle spiculated. AM > PL > AL. Only one genuala r, no genuala 2 and 3 (ga = r, gm = o, gp = o). One tibiala 3 (tp = r). Two or more mastitarsala 3 and one or more mastitibialae 3. Galeala nude. Palpotibial claw trifurcate. Coxala of posterior legs, 2 or more. Eyes, 2 pairs.

Location: Africa.

Host: Mammals.
Microtrombicula cynicia mafekingi n.ssp.

Zumptrombicula cynicia n.g., n.sp.
A. DESCRIPTION.

1) Measurements: Means, in micra, of 7 specimens, holotype and six paratypes:

| AW | PW | SB | ASB | PSB | SD | AP | AM | AL | PL | SH | D | P | V | pa | pm | pp | Ip |
|----|----|----|-----|-----|----|----|----|----|----|----|----|----|----|----|----|----|
| 41 | 52 | 18 | 25  | 30  | 54 | 29 | 24 | 27 | 59 | 26 | 24/20| 20 | 20/27| 238| 196| 236| 670 |

2) Scutum (fig. 8): Peniscutum with moderate punctuation; anterior margin prominent in its middle, with AM base before the ALs line. Posterior margin acutely pointed, showing obviously a basic pentagonal scutal shape. Sensilla bases well apart. Sensilla branched on its apical half, peduncle spiculated. AM > PL > AL; scutal setae with normal barbs. Two pairs of eye lenses (diam. 9 and 7.5 μ).

3) Idiosoma: body setae moderately barbed, as in fig. 12.

\[ fD = 2H + 8.4.6.4.6.4.2 = 36 \]
\[ fV = 4.4.6.4.2.4.4.2 = 34 \]
NDV = 36 + 34 = 70

Uropore between rows 5 and 6 of ventral setae.

4) Legs (figs 9, 10, 11): of medium size, Ip = 670; fsp = 7.7.7; fCx = i.i.3; fSt = 2.2. Dorsal setae of legs moderately barbed (6-10 barbs). Only one ganuala on leg 1; no ganuala on legs 2 and 3; one tibiala on leg 3 (ga = i, gm = o, gp = o, tp = i). Two mastitarsalae and one mastitibiala on leg 3 (MT = 2, Mt = i). Nude subterminala, parasubterminala and pretarsala i and 2 present (ST, pST, PT', PT'' = N). fBT = b-b-b.

5) Gnathosome (fig. 7): Gnathobase with sparse punctae. Cheliceral blades with tricuspid cap. fPp = (B)-(B)-(B).B.B. Galeala nude (Ga = N). Palpotibial claw trifurcate (Gr = 3). fT = 6B.


7) Abnormal specimen: The paratype ≠ L: 764/A/7 displays several peculiar differences from the six other specimens:

a) Mastitarsala = 3, mastitibiala = 2 (instead of MT = 2, Mt = i).

b) Ip = 607 (the other having between 637 and 698).

c) fCx = i.1.2 (instead of i.1.3).


C. HOST: Cynictis pencillata (Viverridae).


1. Scutal width at level of SB.