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A NEW GENUS AND SPECIES OF APOLONIINAE  
(ACARI: TROMBICULIDAE) FROM SOUTH AFRICA  
WITH A KEY TO THE SPECIES IN THE SUBFAMILY (1)

BY

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(With 1 textfigure)

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ABSTRACT

*Afropolonia tgifi*, n. gen. & n. sp., is described from specimens taken from a rat, *Aethomys namaquensis*, collected in South Africa.

Examination of chiggers collected in South Africa by members of the Namaqualand — Namibia Expedition of the King Leopold III Foundation for the Exploration and Protection of Nature has revealed a new monotypic genus of the subfamily Apoloniinae. The holotype is in the collection of the Institut Royal des Sciences Naturelles de Belgique, Brussels, and the paratype in the collection of the U.S. National Museum of Natural History (chigger collection currently housed at B.P. Bishop Museum, Honolulu, Hawaii). All measurements are given in micrometres. Terminology follows GOFF et al. (1982).

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## Afropolonia GOFF, new genus

Type species. — *Afropolonia tgifi* GOFF, new species.

**Diagnosis.** — Apoloniinae with palpal tarsus 5BS; galeala B; cheliceral blade lacking denticles; palpal claw 3-pronged; spiracles and tracheae absent; scutum with anteromedian nasus; PL setae extrascutal; paired AM setae; genuala I, microgenuala I absent; tibia III present; subterminala and parasubterminala I absent.

### Afropolonia *tgifi* GOFF, new species

(Fig. 1)

**Description of species.** — Larvae. *Idiosoma*. Measuring  $455 \times 230$  in holotype. Eyes  $2/2$ , anterior larger (11 diam.) than posterior (6 diam.), ocular plate absent. 1 pair of humeral setae, measuring 32; 76 dorsal idiosomal setae, measuring 20-24, arranged beginning 12-12

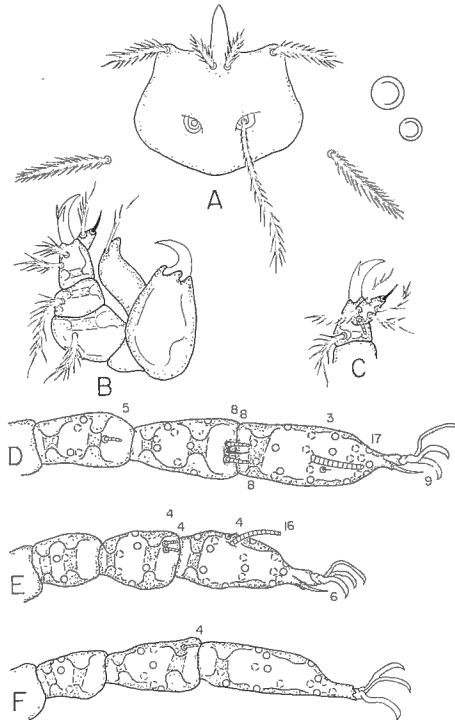


Fig. 1. — Larva of *Afropolonia tgifi* GOFF, n. gen. & n. sp. A, scutum and eyes; B, dorsal aspect of gnathosoma; C, ventral aspect of palpal tibia and tarsus; D, leg I distal 3 segments showing specialized setae (measurements given in  $\mu\text{m}$ ) and bases of branched setae; E, leg II as above; F, leg III as above.

+ 52; 2 pairs of sternal setae, anterior 21-22, posterior 21; 50 preanal setae, 16-23; 20 postanal setae, 19-23; total idiosomal setae 152. *Gnathosoma*. Palpal setal formula B/B/BBB/5BS; palpal claw 3-pronged; galeala B; cheliceral blade (16-17) strongly recurved, lacking denticles; gnathobase lightly punctate, bearing a pair or branched setae. *Scutum*. Lightly punctate with biconcave anterior margin; posterior margin rounded; anteromedian nasus present, measuring  $16 \times 7$ ; AM setae paired, AM bases slightly posterior to level of AL bases; PL setae extrascutal;  $PL > AL > AM$ ; sensillae flagelliform with basal barbs and distal branches. Scutal measurements of holotype followed by those of paratype in parentheses: AW 31 (38); AA 4 (4); SB 15 (15); ASB 24 (25); PSB 17 (17); AM 13 (12); AL 24 (21); PL 29 (24); sens. 51 (50). *Legs*. All 7-segmented, terminating in a pair of claws and a clawlike empodium. Onychotriches absent. IP 595-617. *Leg. I*. 207-224; coxa with 1 branched seta (1B); trochanter 1B; basifemur 1B; telofemur 5B; genu 4B, genuala ( $\sigma$ ); tibia 8B, 2 tibialae ( $\Phi$ ), microtibiala ( $k$ ); tarsus ( $56 \times 18$ ) 20B, tarsala ( $\omega$ ) (17-18), microtarsala ( $e$ ), pretarsala ( $\gamma$ ). *Leg II*. 185-186; coxa 1B; trochanter 1B; basifemur 2B, telofemur 4B; genu 3B; tibia 6B, 2 tibialae ( $\Phi$ ); tarsus ( $44 \times 18$ ) 16B, tarsala ( $\omega$ ) (16), microtarsala ( $e$ ), pretarsala ( $\gamma$ ). *Leg III*. 203-207; coxa 1B; trochanter 1B, basifemur 2B; telofemur 3B; genu 3B, tibia 6B, tibiala ( $\Phi$ ); tarsus ( $52 \times 14$ ) 14B.

*Type data*. — Holotype and 1 paratype from South Africa: Sturder Pass, ex *Aethomys namaquensis* (53 851), taken 4.X.1980 by X. MISONNE.

*Remarks*. — VERCAMMEN-GRANDJEAN & KOLEBINOVA (1968) revised the Apoloniinae and proposed 2 tribes for the 7 species and 6 genera then recognized: Apoloniini and Sauracarellini. Subsequent to this treatment, VERCAMMEN-GRANDJEAN (1970 & 1971) described 2 additional species from Africa and Iran, and GOFF & LOOMIS (1982) described a species from the North Solomon Islands. *Afropolonia* is in the tribe Apoloniini as defined by VERCAMMEN-GRANDJEAN & KOLEBINOVA, based on the unexpanded sensillae, along with *Apolonia* TORRES & BRAGA, 1938, *Straelensia* VERCAMMEN-GRANDJEAN & KOLEBINOVA, 1968, *Vargatula* BRENNAN & YUNKER, 1966, and *Womersia* WHARTON, 1947. Among these genera, *Afropolonia* is most similar to *Straelensia* in the form of the scutum and lacking subterminala, parasubterminala and microgenuala I, but differs in having the palpal tarsus 5BS (4BS for *Straelensia*), tibiala III present (absent in *Straelensia*), coxa II unisetose (bisetose in *Straelensia*) and lacking ventrolateral setae between coxae II and III (present in *Straelensia*). *Afropolonia* differs from *Apolonia* in having palpal tarsus 5BS (7BS in *Apolonia*), lacking subterminala I (present in *Apolonia*) and eyes free on cuticle (on ocular plate in *Apolonia*). *Afropolonia* is similar to species of *Vargatula* in having palpal tarsus 5BS, but differs in having a nasus present (absent in *Vargatula*), coxa II unisetose (bisetose in *Vargatula*), and lacking both subterminala

and microgenuala I (both present in *Vargatula*). Tibiala III is present in *A. tgifi* and *Vargatula pacifica* GOFF & LOOMIS, 1982, but is missing from *Vargatula hispida* BRENNAN & YUNKER, 1966, the other species in the genus *Vargatula*. *Afropolonia* may be separated from *Womersia* in having palpal tarsal formula 5BS (5B for *Womersia*), paired AM setae (single AM seta in *Womersia*), and lacking microgenuala I (present in *Womersia*). *Afropolonia* may be distinguished from the 2 genera in the tribe Sauracarellini, *Sauracarella* LAWRENCE, 1949, and *Afracarella* VERCAMMEN-GRANDJEAN & KOLEBINOVA, 1968, by having flagelliform sensillae (expanded sensillae in genera of Sauracarellini). In their treatment of the Apoloniinae, VERCAMMEN-GRANDJEAN & KOLEBINOVA included comments on *Bernia marita* ALLRED & BECK, 1966, which had been tentatively placed in the Apoloniinae by ALLRED & BECK (1966). Subsequently TANIGOSHI & LOOMIS (1969) noted that this species, represented by only the holotype, was actually an aberrant specimen of *Hyponeocula arenicola* (LOOMIS, 1954) and thus removed from the Apoloniinae.

#### Key to the Genera Species of Apoloniinae

1. Sensillae expanded . . . . . 2.  
Sensillae flagelliform . . . . . 4.
2. Palpal tarsus 6BS; 3 genualae I; coxa bisetose . . . . .  
. . . . . *Afracarella africana* (LAWRENCE, 1949).  
Palpal tarsus 7BS; 2 genualae I; coxa II unisetose . . . . . 3.
3. AM < PL; tarsala I < tarsala II . . . . .  
. . . . . *Sauracarella whartoni* LAWRENCE, 1949.  
AM > PL; tarsala I > tarsala II . . . . .  
. . . . . *Sauracarella montana* LAWRENCE, 1949.
4. Single AM seta . . . . . 5.  
Paired AM setae . . . . . 8.
5. Palpal tarsus 5B; galeala N; microgenuala I present . . . . . 6.  
Palpal tarsus 4BS; galeala B; microgenuala I absent . . . . . 7.
6. Tarsala II bluntly tapering; microgenuala II absent . . . . .  
. . . . . *Womersia strandtmanni* WHARTON, 1947.  
Tarsala II with bulbapex; microgenuala II present . . . . .  
. . . . . *Womersia irani* VERCAMMEN-GRANDJEAN, ROHDE &  
MESGHALI, 1970.
7. 32 setae in sternal region; galeala B . . . . .  
. . . . . *Straelensia europaea* VERCAMMEN-GRANDJEAN &  
KOLEBINOVA, 1968.

- 18 setae in sternal region; galeala N . . . . .
- . . . . . *Straelensia africana* VERCAMMEN-GRANDJEAN, 1971.
8. Nasus present . . . . . 9.
- Nasus absent . . . . . 10.
9. Palpal tarsus 5BS; subterminala I absent . . . . . *Afropolonia tgifii*, n. sp.
- Palpal tarsus 7BS; subterminala I present . . . . .
- . . . . . *Apolonia tigipioensis* TORRES & BRAGA, 1938.
10. Tibiala III present; coxa II unisetose; eyes 1/1 . . . . .
- . . . . . *Vargatula pacifica* GOFF & LOOMIS, 1982.
- Tibiala III absent; coxa II bisetose; eyes absent . . . . .
- . . . . . *Vargatula hispida* BRENNAN & YUNKER, 1966.

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