

A NEW SPECIES OF *PELLONYSSUS* CLARK AND YUNKER FROM THE ETHIOPIAN
ZOOGEOGRAPHICAL REGION (ACARINA : DERMANYSSIDAE)

BY

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In her revision of the genus *Pellonyssus* Clark and Yunker, TILL (1964) lists six species from the Ethiopian Region. Since then no new species have been described from this region. Two new species were described from birds of Panama by YUNKER and RADOVSKY (1966) and records of *Pellonyssus* species from New Guinea were noted by ALLRED (1970).

During July 1973, heavily parasitised Palm Swifts (*Cypsiurus parvus*) (Lichtenstein) were sent in to this Department by Mr. P. MILSTEIN of the Transvaal Nature Conservation Division for checking. Among the many parasites recovered were specimens of an apparently undescribed *Pellonyssus* species. These were sent to Dr. W. M. TILL who confirmed that they represented a new species. The new species is hereby described and named in honour of Dr. TILL, for her numerous contributions to Acarology in the Ethiopian Region.

DIAGNOSIS

Metasternal setae present, anteromedian spine on the palp trochanter, very short peritremes, ventral seta of femur III proximal to the femoral fissure, *Z*₄ absent from the opisthonotal shield, sternal setae I short, *pd*₃ on genu I usually absent, presence of 4-8 pairs of long thickened pointed setae on the posterior edge of the opisthosoma.

***Pellonyssus tillae* n. sp.**

FEMALE (Figs 1 & 2) : Deutosternum with 6-8 denticles arranged in a single file ; palp trochanter with a prominent anteromedian spine, palp tibia with 13 setae ; first segment of chelicerae 19-21 μ , second segment 199-235 μ and the chelae 24-26 μ .

Idiosoma of holotype (not engorged) 662 μ long by 470 μ wide, paratype ♀♀ 604-729 μ long by 403-537 μ wide at the level of coxa IV. Podonotal shield 269-307 μ long and 269-307 μ wide at the level of setae *z*₆. There are nine pairs of setae on the shield, setae *j*₁ lying on the integument anterior to the shield. The discal setae of the shield are shorter than the marginal setae, 5 and *z*₅ just under $\frac{1}{2}$ the length of *s*₄. Posterior margin of the shield with a medial protrusion. Opisthonotal shield 278-321 μ long and 221-241 μ wide at the level of *J*₁ ; 5 pairs of setae on the



FIG. 1. — *Pellonyssus tillae* n. sp. Venter.

shield which are subequal in length to the setae on the discal portion of the podonotal shield. *Z*5 is longer, about $1\frac{1}{2}$ times as long as *S*5. Anterior margin with a median concavity, *z*4 absent from the shield. A reticulate patterning is present on both shields anteriorly, fading towards the posterior margins. Pores are visible on the shields, 4 on the podonotal and 5 on the opisthonotal shield.

The sternal shield is narrow, the posterior margin arched, length 21-28 μ , width between setae II 127-153 μ . The shield well sclerotised and with reticulations between the sternal setae. The anterolateral regions weakly sclerotized. Sternal setae I short about $\frac{1}{4}$ to $\frac{1}{3}$ the length of the shield. Sternal setae II 64-73 μ long, setae III 68-78 μ long. Two pairs of pores on the shield, the third pair situated on the soft integument posterior to the metasternal setae. Metasternal setae shorter than sternal setae II and III, about 49-52 μ long.

Genital shield striated and tapering to a rounded tip. Length from the level of the genital setae 134-169 μ and width at the level of the setae 80-106 μ . Genital setae 28-40 μ long.

Anal shield with anterior margin straight; length to the base of the postanal seta 68-87 μ , width through the anus 82-99 μ . Paranal setae level with the middle of the anus, 35-47 μ long, postanal seta 21-24 μ long. Anus lies close to the anterior margin of the shield.

Peritremes very short, do not extend further than coxa III. The peritrematal shield extends a short distance anterior to the peritreme. The shield curves around coxa IV to fuse weakly with the endopodal elements of coxa IV. Weakly sclerotised and indistinct metapodal shields present; oval in shape measuring about 26 μ long by 10 μ wide. Close to the genital shield lie a pair of weakly sclerotised elongated shields.

Integument of the idiosoma bears 27-35 setae and the posterior margin of the opisthosoma about 4-8 pairs of thickened pointed setae longer than the other integumental setae (fig. 1).

Chaetotaxy of the legs similar to *Pellonyssus biscutatus* (Hirst); ventral seta of femur III lies proximal to the femoral fissure, seta *v*4 absent from femur I, *av*2 present on genu I, *pd*3 on tibia IV is present. Seta *pd*3 on genu I is absent on all specimens except the left leg of one paratype female.

MALE AND IMMATURE STAGES : not known.

TYPE MATERIAL : Holotype ♀ and 14 paratype ♀♀ from *Cypsiurus parvus* (Lichtenstein), Tzaneen, Transvaal, vii. 73. Holotype and 10 paratypes in the collection of the S.A.I.M.R., 2 paratype ♀♀ in the British Museum (Natural History), London, and 2 paratype ♀♀ in the collection of Dr. W. M. TILL.

DISCUSSION

Pellonyssus tillae n. sp., *Pellonyssus biscutatus* (Hirst) and *Pellonyssus trachyphoni* Till, three species with metasternal setae have affinities with *Pellonyssus similis* (Zumpt and Till) which lacks metasternal setae. All four species have an anteromedian spine on the palp trochanter and setae *v* of femur III is proximal to the femoral fissure. *P. tillae* further resembles *P. similis* in the short peritremes and the absence of setae *Z*4 from the opisthonotal shield, the shape of the dorsal shields and the short sternal setae I. There appear to be two species groups in the genus; a « *biscutatus* » group consisting of *P. biscutatus*, *P. trachyphoni* and *P. tillae*, in which *P. similis* may be included and a « *reedi* » group comprising *Pellonyssus reedi* (Zumpt and Patterson), *Pellonyssus viator* (Hirst) and *Pellonyssus zosteropus* Till.

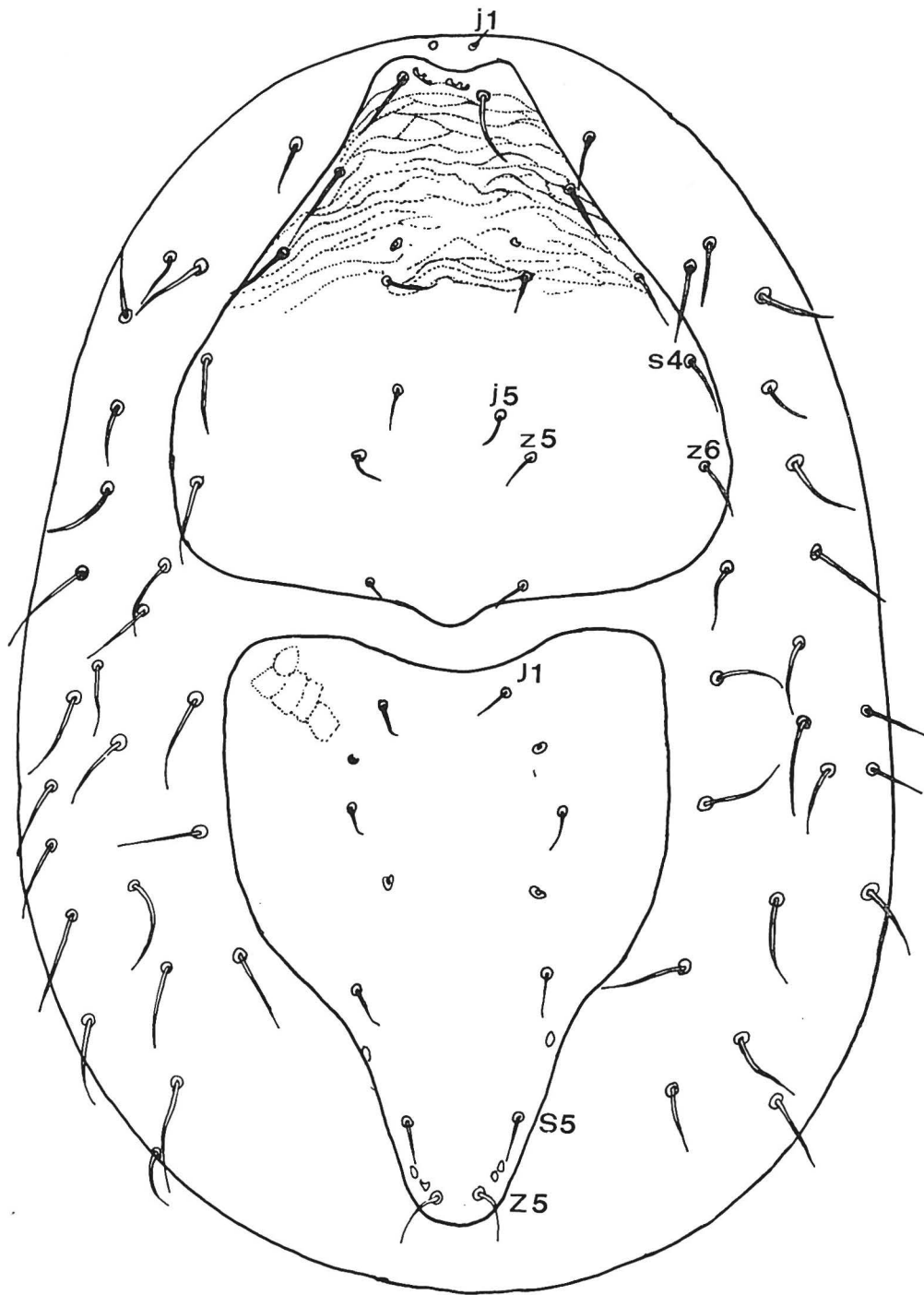


FIG. 2. — *Pellonyssus tillae* n. sp. Dorsum.

KEY TO THE *PELLONYSSUS* SPECIES OF THE ETHIOPIAN REGION
(FEMALES)
(Modified from Till, 1964)

1. Palp trochanter with an anteromedian spine. Ventral seta of femur III proximal to fissure. 2
- Palp trochanter without an anteromedian spine. Ventral seta of femur III distal to the femoral fissure 5
2. Peritremes very short not extending further than coxa III, seta *Z4* absent from the opisthotal shield 3
- Peritremes longer reaching the middle of coxa II, seta *Z4* present on the opisthotal shield. 4
3. Metasternal setae absent, seta *av2* on genu I absent. *P. similis* (Zumpt & Till)
- Metasternal setae present, setae *av2* on genu I present. *P. tillae* n. sp
4. Tibia IV with seta *pd3* present, sternal shield with a distinctive reticulate pattern. *P. biscutatus* (Hirst)
- Tibia IV with seta *pd3* absent, sternal shield with granulation and close lying reticulations. *P. trachyphoni* Till
5. Anterodorsal spine on coxa II absent. *P. zosteropus* Till
- Anterodorsal spine on coxa II present 6
6. Podonotal shield with a posteromedian projection. Coxa II with a small anterodorsal spine. *P. viator* (Hirst)
- Podonotal shield with the posterior margin straight. Anterodorsal spine on coxa II large. *P. reedi* (Zumpt & Patterson)

SUMMARY

A new species of *Pellonyssus* Clark and Yunker is described from a Palm Swift (*Cypsiurus parvus*) (Lichtenstein)) taken at Tzaneen, Republic of South Africa. Interspecific relationships within the genus are discussed and a key to the species of the Ethiopian zoogeographical region is included.

ZUSAMMENFASSUNG

Eine neue Art der Gattung *Pellonyssus* Clark & Yunker, die *Cypsiurus parvus* (Lichtenstein) parasitiert, ist beschrieben und ihre verwandtschaftlichen Beziehungen innerhalb der Gattung besprochen. Bisher bekannter Fundort ist Tzaneen im Transvaal, Republik von Südafrika. Es wird weiterhin eine Bestimmungstabelle der bisher aus der äthiopischen zoogeographischen Region bekannt gewordenen *Pellonyssus*-Arten gegeben.

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