

# New and interesting mites from the Geneva Museum LXXIV : first Scutacarid mites from Brunei with description of remarkable new genus (Acari, Tarsonemina)

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NEW AND INTERESTING MITES FROM THE  
GENEVA MUSEUM LXXIV.  
FIRST SCUTACARID MITES FROM BRUNEI WITH  
DESCRIPTION OF A  
REMARKABLE NEW GENUS (ACARI: TARSONEMINA)

BY

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ABSTRACT

Two Scutacarid species from Brunei are described as new to science. For one species a new genus is established: *Bruneipes* gen. n. (Scutacaridae).

RÉSUMÉ

Deux espèces nouvelles de Scutacaridés sont décrites de Brunei. Pour l'une d'elles, un genre nouveau est créé: *Bruneipes* gen. n. (Scutacaridae).

INTRODUCTION

In the present contribution we continue the description and survey of the Tarsonemina fauna of the Far East (Oriental Region) (cf. MAHUNKA & MAHUNKA-PAPP 1988a, 1988b). Owing the kindness of Dr. B. Hauser (Keeper of the Arthropoda Section of the Muséum d'Histoire naturelle, Geneva), we had the opportunity to study a material of soil mites which has been collected during his 1988 expedition to Brunei in collaboration with Dr. C. Lienhard.

In this rich material we have found two Scutacarid species new to science, one of them representing a new genus.

LIST OF LOCALITIES

- Bru-88/21: Brunei (Belait District): "Andulau Forest Reserve" près de Sungai Liang, K-7, forêt primaire, prélèvement de sol dans les angles formés par les contreforts d'un grand arbre, 50 m, extraction par appareil Berlese, 19.XI.1988, leg. B. Hauser.
- Bru-88/29: Brunei (Belait District): Sungai Liang, Arboretum de la "Forest Research Station", forêt primaire, prélèvement de sol dans les angles formés par les contreforts de deux arbres.

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## DESCRIPTIONS

**Bruneipes** gen. n.

**D i a g n o s i s :** Family *Scutacaridae*. Normal Scutacaroid habitus. Trichobothrium present, but sensillus absent. Gnathosoma simple, not modified. Posterior sternal plate becoming wide at the leg IV. Tibiotarsus of leg I with claw, tibia and tarsus of legs II and III bearing modified setae. Heterodactyly present.

**T y p e s p e c i e s :** *Bruneipes cryptus* sp. n.

**R e m a r k s :** On the basis of the absence of sensillus, the strongly widened sternal plate and the modified setae on tibia and tarsus of legs II and III, the new taxon could not be readily classified into any of the known genera of the family *Scutacaridae*. By these characteristics and by the position of its setae *3a-3b*, the form of apodemes 2, and by the chaetotaxy of leg I the new species is at once distinguished from all *Scutacarus* Gros, 1845 species.

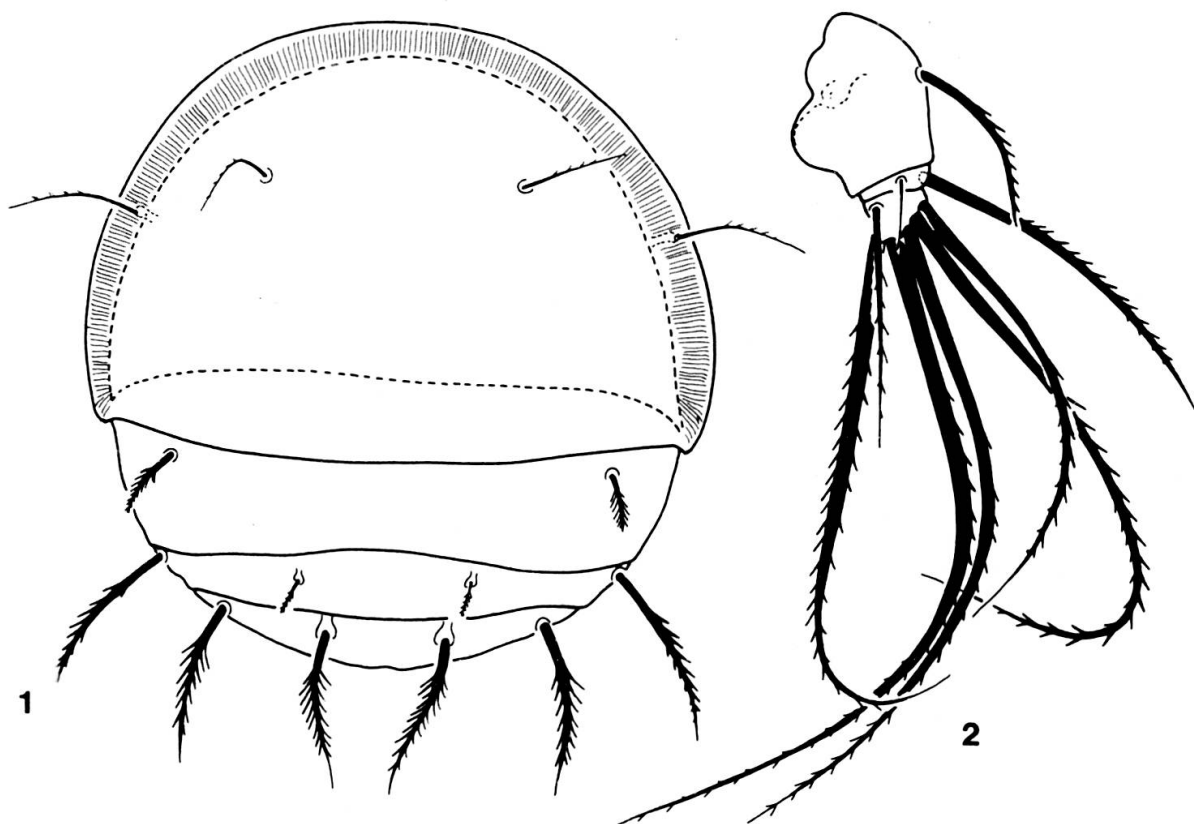
**Bruneipes cryptus** sp. n.

**M e a s u r e m e n t s .** – Length: 150  $\mu\text{m}$ , width: 158  $\mu\text{m}$ .

**D o r s a l r e g i o n** (Fig. 1): Clypeus and clypeal margin wide. Both pairs of clypeal setae thin, setiform and sparsely pilose, all other setae – excepting  $p_2$  – much robuster, blunt at tip and distinctly pilose. Setae  $d$  and  $f$  short,  $d$  twice as long than  $f$ , setae  $e < h_1 \cong h_2$ . Setae  $p_1$  characteristically curved outwards, with very long pili,  $p_2$  much shorter, thin and smooth. Setae  $p_3$  stand far from the inner pairs of setae of  $P$ -segment and are slightly longer than  $p_1$ . Trichobothrium with strong marginal spines, sensillus absent.

**V e n t r a l r e g i o n** (Fig. 3): Gnathosoma without any special feature. Apodemes 2 and 3 of the same thickness, sternal apodeme similar to them. All epimeral setae – excepting  $2b$  – on anterior sternal plate short, setae on the posterior sternal plate much longer. Setae  $3a$  originating close to the sternal apodeme and very near to each other, setae  $3b$  very far removed from them and very near to  $3c$ . Setae  $4a$  arising far in front of setae  $4b$ , the distance between setae  $4a$  greater than between setae  $4b$ . These latter reaching to the posterior margin of the body. Posterior part of the sternal plate strongly widened around leg IV.

**L e g s :** Peduncle of claw of leg I short, claw with a very long, curved, and gradually narrowed distal part. Modified seta  $s$  very strong, thick (Fig. 8). All setae of tibiotarsus I short, the basal tubercle of seta  $tc''$  only scarcely risen from the surface. Solenidia forming semicircle around this tubercle (Fig. 8), among them  $\varphi_1$  the largest. Seta  $v'$  very thick, spiniform (Fig. 9). Tibia and tarsus of legs II and III bearing



FIGS 1-2.

*Bruneipes cryptus* gen. n., sp. n. – 1: dorsal side, 2: leg IV.

enormous spines (Figs 5-6), two of them arising on tarsus, two on tibia.  $\omega$  solenidium of tarsus II shorter than these spines. Strong heterodactyly, inner claw on legs II and III much smaller than the outer one. Trochanter of leg IV very wide and short, all other articles small (Fig. 2). Tibiotarsus of leg IV bearing only 6 very long setae.

**M a t e r i a l e x a m i n e d :** Holotype: Bru-88/21, MHNG.<sup>1</sup>

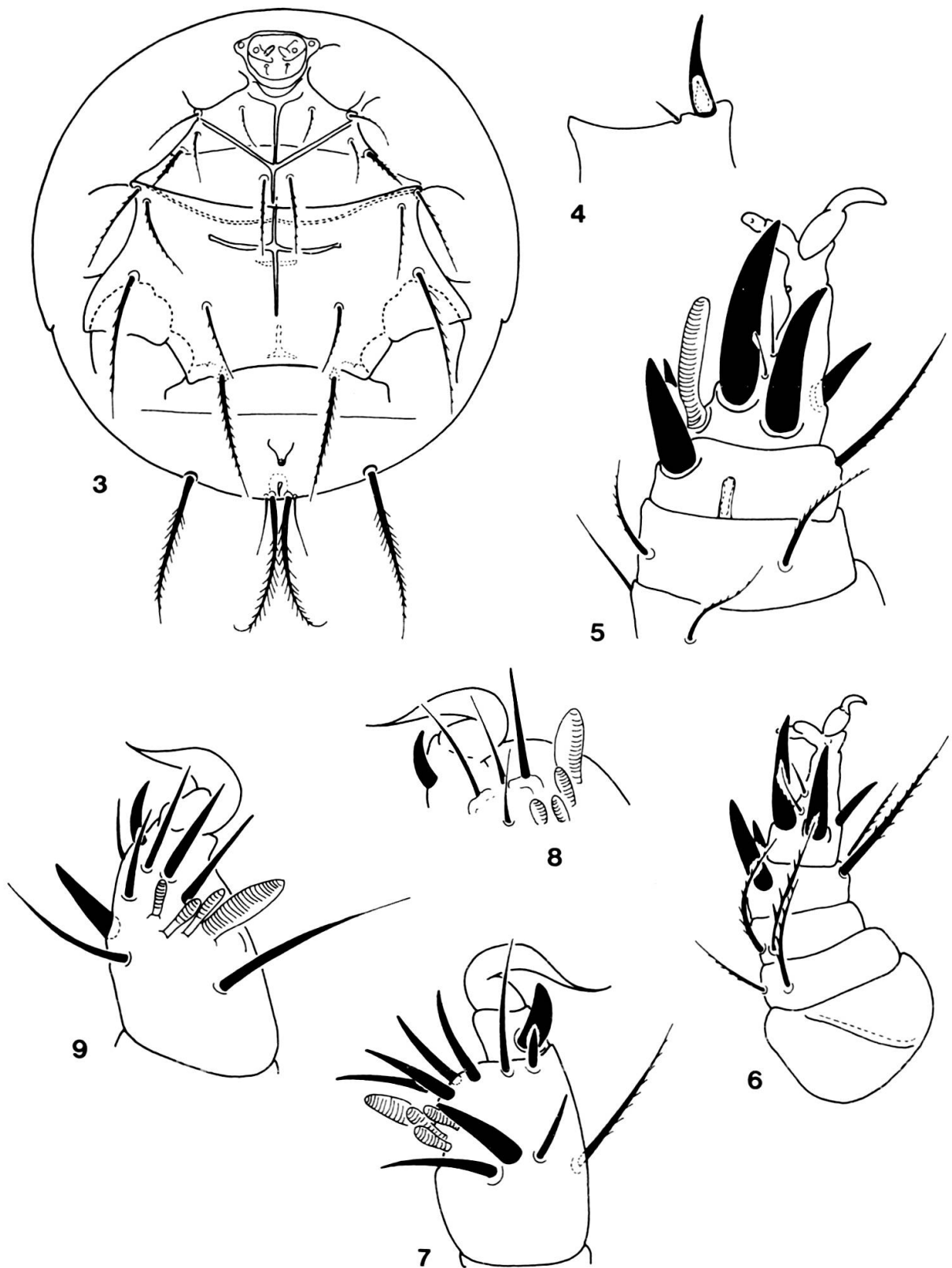
**R e m a r k s :** see the remarks after the generic diagnosis.

### **Scutacarus comteae** sp. n.

**M e a s u r e m e n t s .** – Length: 151-178  $\mu\text{m}$ , width: 140-174  $\mu\text{m}$ .

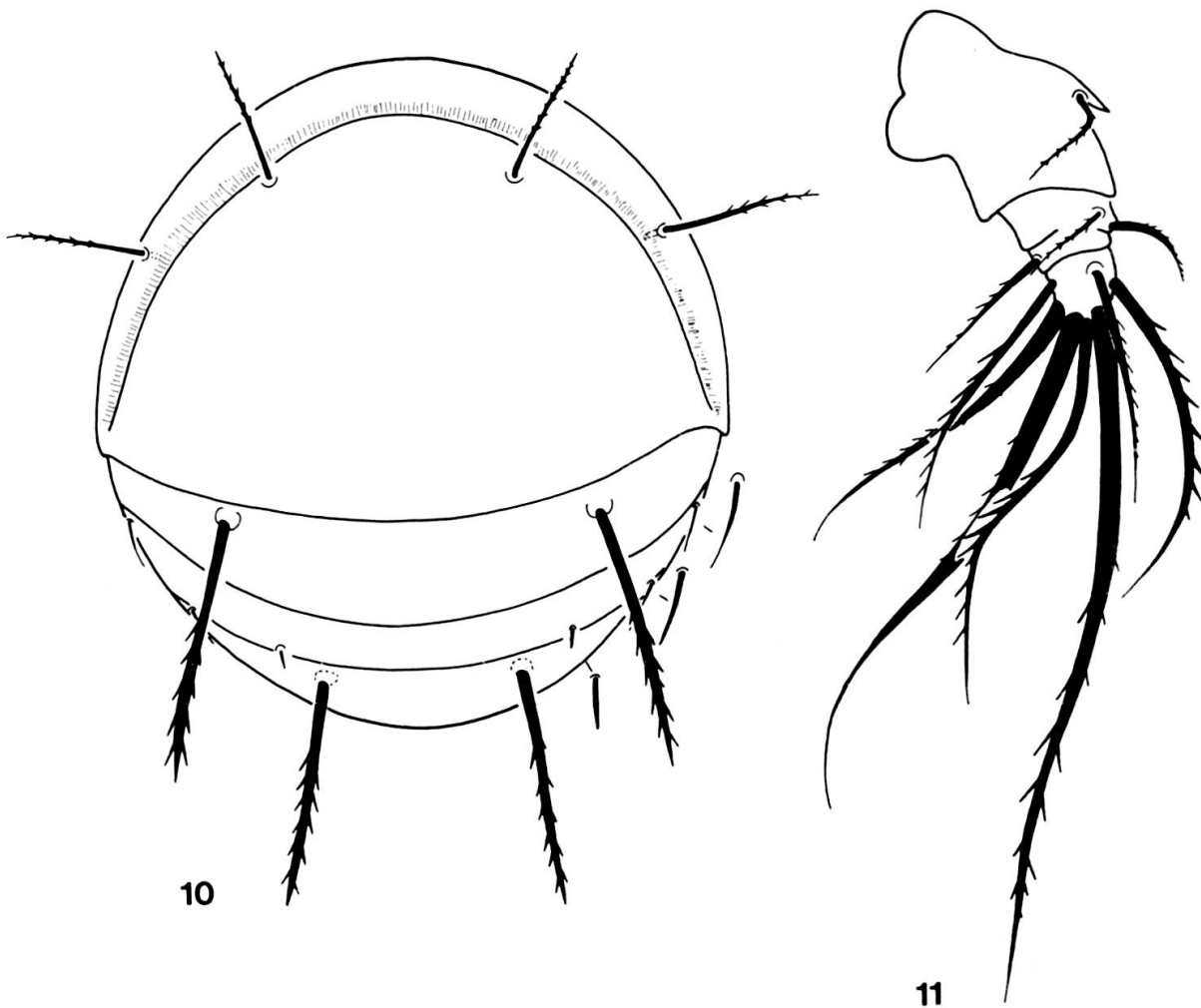
**D o r s a l r e g i o n** (Fig. 10): Clypeus hardly broader than the other dorsal segments, its margin narrow. Clypeal setae approximately of the same length ( $c_1$ : 40  $\mu\text{m}$ ,  $c_2$ : 43  $\mu\text{m}$ ), both pairs straight and erect. Head of sensillus characteristically excavate medially (Fig. 15). Among the setae of segments *D* - *P* great differences exist: setae *d* and  $h_1$  very strong, thick, erect and well spinose; setae *e*, *f*,  $h_2$  and  $p_3$  very small,

<sup>1</sup> MHNG = deposited in the Muséum d'Histoire naturelle, Geneva.



FIGS 3-9.

*Bruneipes cryptus* gen. n., sp. n. – 3: ventral side, 4: trichobothrium, 5: leg II, 6: leg III, 7: tarsus of leg I in ventral view, 8: end of tarsus of leg I in dorsal view, 9: tarsus of leg I in lateral view.



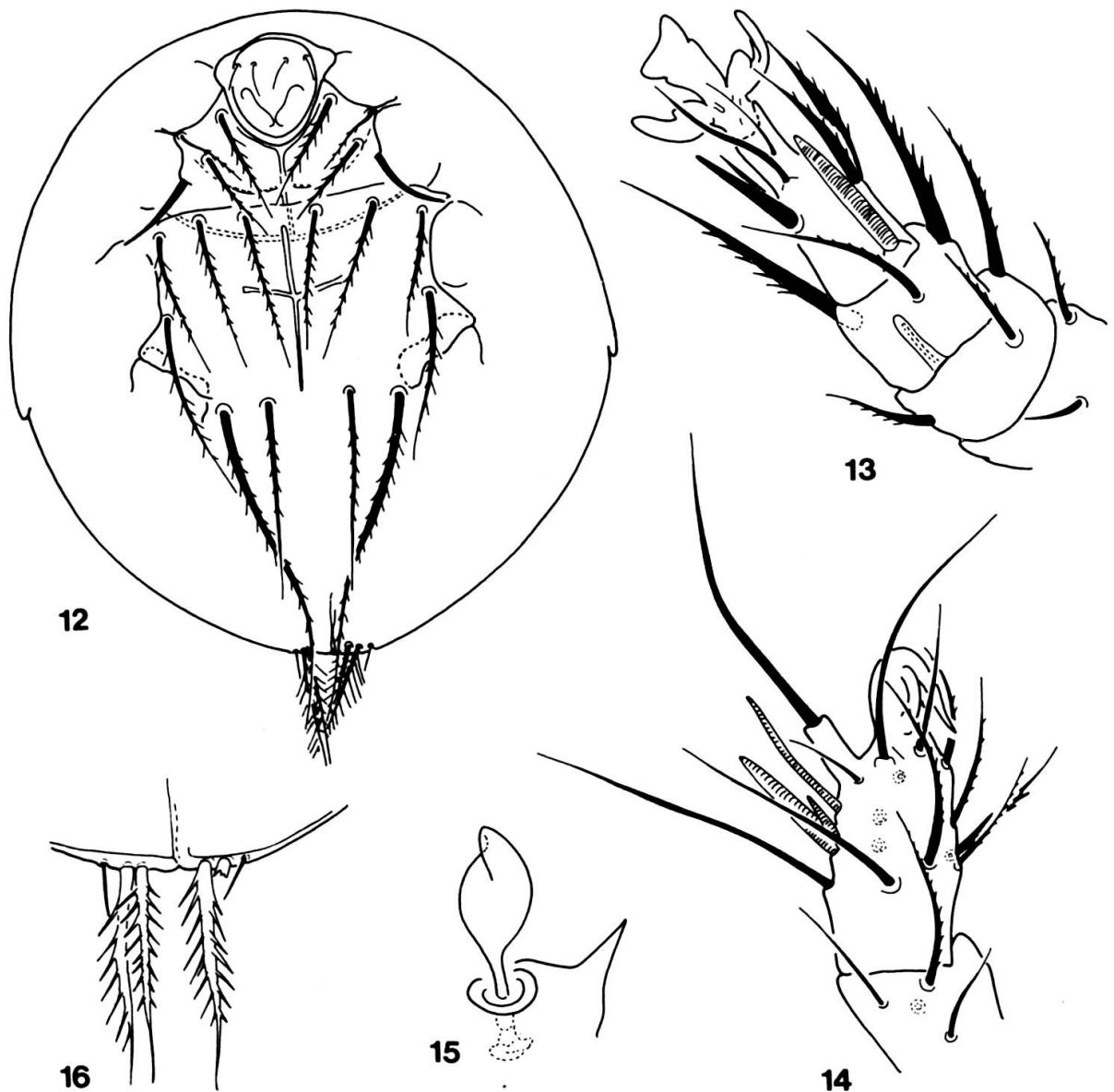
FIGS 10-11.

*Scutacarus comteae* sp. n. – 10: dorsal side, 11: leg IV.

spiniform ( $f$  and  $h_2$ ) or setiform ( $e$ ), all smooth. All three pairs of setae  $p$  (Fig. 16) stand near to each other, both inner pairs ( $p_1$  and  $p_2$ ) strong, with long lateral spines, the outer pair simple, spiniform and smooth.

**V e n t r a l   r e g i o n** (Fig. 12): Apodemes simple without any special features. All epimeral setae strong and – excepting  $2b$  – well ciliate and long. Distance between setae  $3a$  -  $3b$  the same as that between  $3b$  -  $3c$ . Setae  $4a$  and  $4b$  originating in one transversal line, both pairs very long, setae  $4a$  approaching posterior margin of body, setae  $4b$  extending beyond it.

**L e g s**: Claw of leg I sitting on a short peduncle, its apex long, thin, curved (Fig. 14). Basal tubercle of seta  $tc''$  long, but shorter than solenidium  $\omega_2$ . Setae  $tc''$  and  $d$  nearly equal in length. No strongly dilated seta on tarsi II (Fig. 13) and III, solenidium  $\omega$  on tarsus II longer than seta  $pl''$ . Seta  $v$  on trochanter II short and weak, the same seta



FIGS 12-16.

*Scutacarus comteae* sp. n. – 12: ventral side, 13: leg II, 14: leg I, 15: trichobothrium, 16: setae of *Ps*-segment.

on trochanter III slightly longer, and very strong, but shorter than the diameter of trochanter III. Dorsal spur of trochanter IV very long and strong. Seta *dF* comparatively short, not longer than *I'*. Tibiotarsus of leg IV (Fig. 11) short, all setae on it very strong. Seta *tc''* much shorter than setae *tc'* and *pv''*.

**Material examined:** Holotype: Bru-88/29, 4 paratypes from the same sample. Holotype and 2 paratypes: MHNG, 2 paratypes (1379-PT-89): HNHM<sup>2</sup>.

<sup>2</sup> HNHM = deposited in the Hungarian Natural History Museum, Budapest, with the identification number of specimens in the Collection of Arachnida.

**R e m a r k s :** The new species belongs to a species group, which is well characterisable by the great differences existing between setae  $f$  and  $h_1$  and by the closely set  $p_1$ - $p_3$  setae. This group consists of the following species:

*Scutacarus abnormalis* Mahunka, 1967

*Scutacarus comteae*, sp. n.

*Scutacarus jaccoudi* Mahunka, 1972

These three species are closely related (perhaps their status will prove to be only subspecific), but *S. comteae* is distinguished from the others by the excavated head of sensillus and the ratio of setae  $d - p$  ( $d_1 < h_1$  in *abnormalis* and *jaccoudi*). *Scutacarus jaccoudi* is distinguished from the other two species by the very strong and long seta  $pl''$  on tarsi II and III.

We dedicate the new species in gratitude to Mrs L. Comte, Dr. Hauser's former assistant.

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