

## FOUR NEW SPECIES OF SCUTACARID MITES (ACARINA : PROSTIGMATA) FROM IRELAND

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TAXONOMIE SCUTACARIDAE	ABSTRACT : Three new species and one new subspecies of the genus <i>Scutacarus</i> (subgenus <i>Variatipes</i> ) are described and illustrated. These species were named <i>Scutacarus evansi</i> , <i>S. moustafai</i> , <i>S. offaliensis</i> and <i>S. eucomus clonsasti</i> . All were found in reclaimed peat soil at Clonsast, Co. Offaly.
TAXONOMIE SCUTACARIDAE	RÉSUMÉ : Trois espèces et une sous-espèce nouvelles du genre <i>Scutacarus</i> (sous-genre <i>Variatipes</i> ) sont décrites et figurées. Elles se nomment <i>Scutacarus evansi</i> , <i>S. moustafai</i> , <i>S. offaliensis</i> et <i>S. eucomus clonsasti</i> . Toutes ont été trouvées dans le sol d'une tourbière amendée, à Clonsast, Co. Offaly.

### INTRODUCTION

During our ecological study of the acarine fauna of grassland several new species of the family Scutacaridae were recorded. Scutacarids are found in a wide variety of habitats including commercial mushroom houses, compost, forest litter, soil, humus, manure, small bird and mammal nests and on insects as well as on other mites (DELFINADO *et al.*, 1976 ; NORTON and IDE, 1974). The present paper deals with four new species belonging to the genus *Scutacarus* found in a reclaimed peat soil at Clonsast, Co. Offaly.

The holotypes and paratypes, when available, of the new species are deposited in the collection of the National Museum of Ireland.

### Genus *Scutacarus* Gros 1845

The genus *Scutacarus* is distinguished by the following characters : leg IV is 4-segmented, usually

with a short tibiotarsus bearing six to eight setae and without pretarsus, claws and empodium. Leg I is also 4-segmented and may or may not have claws. According to KARAFIAT (1959), *Variatipes* is a subgenus of *Scutacarus* containing species without a claw on tibiotarsus I.

### *Scutacarus (Variatipes) evansi* sp. nov.

■ FEMALE : length 171-180 6m, elliptical.

*Dorsum* : (Fig. 1, a) : clypeus large with free margin narrow. All dorsal setae penicillate, except for *e2* and *f2*. *c1*, *c2* and *d* are subequal in length (26 µm) ; *f1* slightly longer than *e1* ; *e2* serrate and the longest (83 µm) and *f2* the strongest of the dorsal setae.

*Venter* : (Fig. 1, b) : apodemes weakly developed. Epimeral setae *1a* pectinate ; *1b* and *2a* slightly barbed ; *2b* robust, dagger-like, simple ; *3b* longer than *3a*, simple ; *3c* and *4c* strong, barbed ; *4a*

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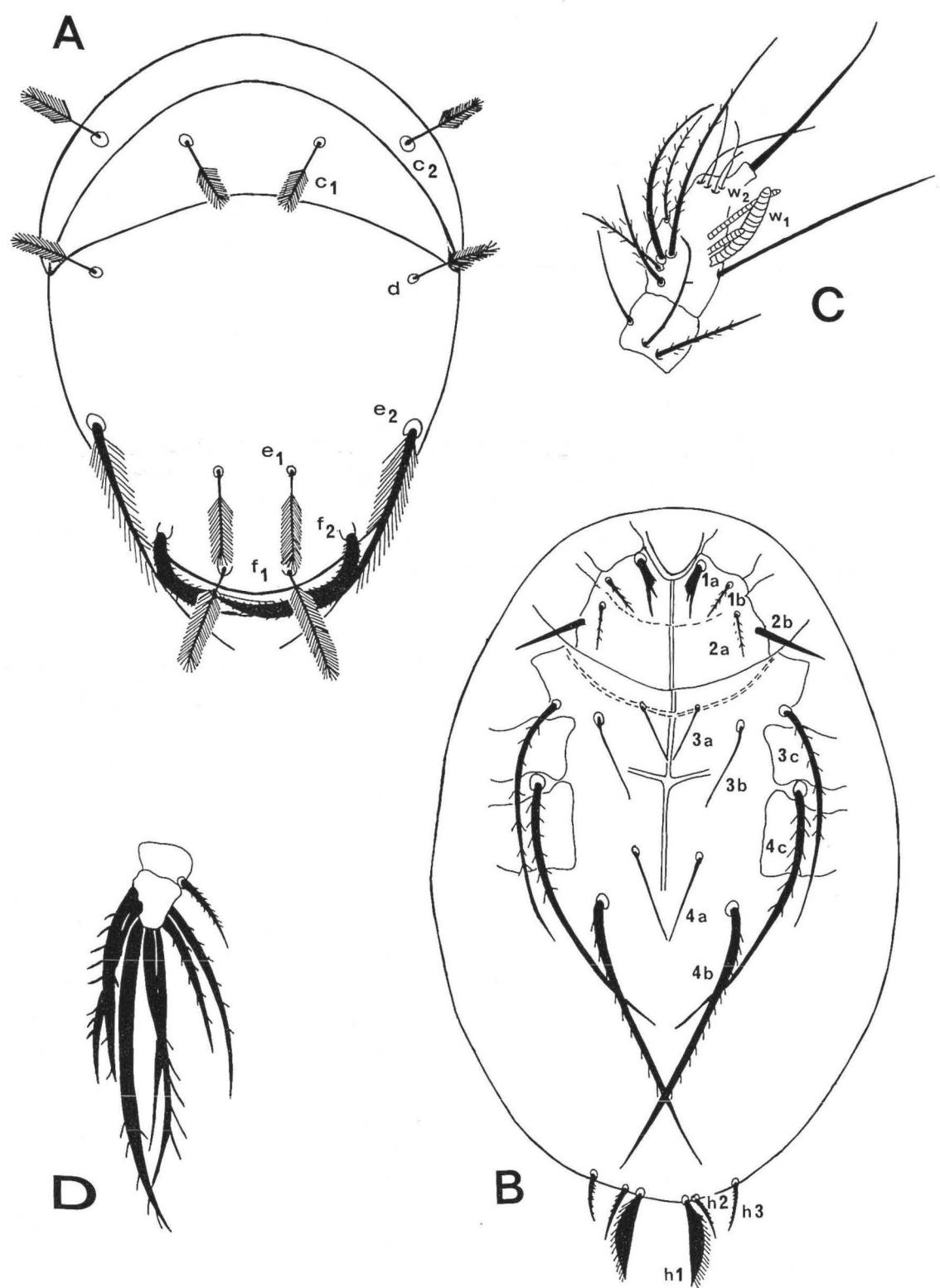


FIG. 1 : *Scutacarus evansi* sp. nov., female.  
 A. — Dorsal aspect. B. — Ventral aspect. C. — Tarsus I. D. — Tarsus IV.

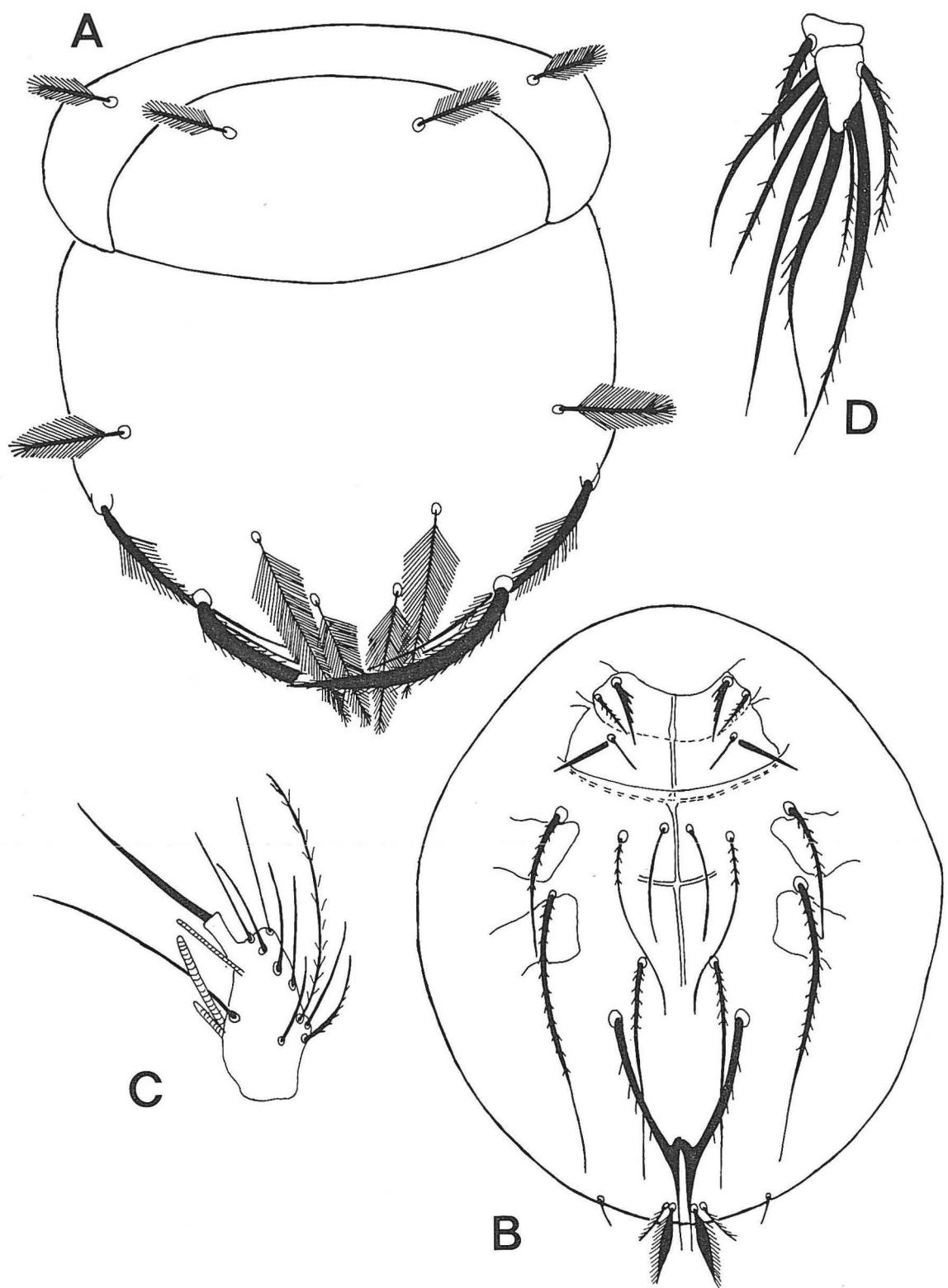


FIG. 2 : *Scutacarus moustafai* sp. nov., female.

A. — Dorsal aspect. B. — Ventral aspect. C. — Tarsus I. D. — Tarsus IV.

simple, short, situated anterior to  $4b$ ;  $4b$  very strong, barbed and long, not reaching the posterior margin of body. Three pairs of caudal setae,  $h1$  fan like;  $h2$  and  $h3$  subequal in length, slightly barbed. Legs : tibiotarsus I without claw (Fig. 1, c), solenidion  $\omega_1$  stout and the tallest;  $\omega_2$  rod like. Tibiotarsus IV bears seven ciliated setae (Fig. 1, d).

■ MALE : unknown.

*Holotype* : one female collected from grassland on reclaimed peat at Clonsast, Co. Offaly in April 1985.

*Remarks* : this new species belongs to the *Crassisetus* group, and is most closely related to *Scutacarus spinifer* Mahunka 1968. It differs from *spinifer* in having setae  $1a$  pectinate and  $1b$  barbed, setae  $4b$  barbed and not reaching the posterior margin of body, the form of setae  $h1$  and tibiotarsus IV bearing seven setae.

**Scutacarus (Variatipes) moustafai** sp. nov.

■ FEMALE : length 188-192  $\mu\text{m}$ , breadth 140-144  $\mu\text{m}$ , body oval to elongate.

*Dorsum* : (Fig. 2, a) : clypeus large. All dorsal setae penicillate, except for  $e2$  and  $f2$ .  $c1$  and  $c2$  subequal in length (24  $\mu\text{m}$ ) and  $d$  slightly longer;  $e1$  (48  $\mu\text{m}$ ) longer than  $f1$  (36  $\mu\text{m}$ );  $e2$  serrate, strong and longest of the dorsal setae (96  $\mu\text{m}$ );  $f2$  very strong and serrate.

*Venter* : (Fig. 2, b) : apodemes weakly developed. Epimeral setae  $1a$  pectinate;  $1b$  serrate;  $2a$  simple;  $2b$  robust, dagger-like, simple;  $3a$  simple, shorter than  $3b$ ;  $3c$  and  $4c$  strong, with strong serrations;  $4a$  barbed, long, situated anterior to  $4b$ ;  $4b$  very strong and long. Three pairs of caudal setae,  $h1$  large, plumose;  $h2$  serrate;  $h3$  simple and shorter than  $h2$ .

Legs : tibiotarsus I without claw (Fig. 2, c), solenidion  $\omega_1$  stout and the tallest  $\omega_2$  rod-like. Tibiotarsus IV with seven ciliated setae (Fig. 2, d).

■ MALE : unknown.

*Holotype* : one female collected from grassland on reclaimed peat at Clonsast, Co. Offaly in November 1985.

*Paratype* : two females collected with the holotype.

*Remarks* : this new species belongs to the *Crassisetus* group and is most closely related to *Scutacarus (Scutacarus) crassisetus plumosus* (Paoli 1911) and *Scutacarus cordisetus* Mahunka 1976. It differs from *plumosus* in not having a claw on tibiotarsus I and it can be distinguished from *cordisetus* by having setae  $e1$  and  $f1$  much longer than  $c1$ , by the shape of setae  $h1$  and the length of setae  $3b$ , and by the chaetotaxy of tarsus IV which is wholly different from that of *cordisetus*.

**Scutacarus (Variatipes) offaliensis** sp. nov.

■ FEMALE : length 150-155  $\mu\text{m}$ , breadth 137-141  $\mu\text{m}$ , body oval to elongate.

*Dorsum* : (Fig. 3, a) : clypeus large, with free margin wide. All dorsal setae simple;  $c1$  as long as  $c2$  (32  $\mu\text{m}$ );  $d$ ,  $e2$  and  $f2$  subequal in length (19  $\mu\text{m}$ );  $e1$  shorter than  $f1$  and apically bent.

*Venter* : (Fig. 3, b) : epimeral setae  $1a$  long and ciliated;  $1b$  and  $2a$  simple;  $2b$  robust, saber-like, smooth;  $3a$  shorter than  $3b$ , simple;  $3c$  as long as  $4c$ , barbed;  $4a$  simple, about  $\frac{2}{3}$  as long as, and inserted anterior to  $4b$ ;  $4b$  simple, long and reaching posterior margin of body. Caudal setae  $h1$  and  $h2$  adjacent, barbed on one side only,  $h1$  and  $h2$  of subequal length;  $h3$  simple, minute and rather removed from  $h2$ .

Legs : tibiotarsus I without claw (Fig. 3, c),  $\omega_1$  stout, thick and the longest of the solenidia. Tibiotarsus IV with 7 setae (Fig. 3, d).

■ MALE : unknown.

*Holotype* : one female collected from grassland on reclaimed peat at Clonsast, Co. Offaly in April 1985.

*Remarks* : This new species is close to *Scutacarus baloghi* Mahunka 1967. It differs from *baloghi* in having  $c2$  anterior to  $c1$  as opposed to  $c1$  and  $c2$  arising along a common transverse line in *baloghi*, setae  $1a$  long and ciliated, setae  $4b$  reaching the posterior margin of the body and by caudal setae  $h3$  being minute.

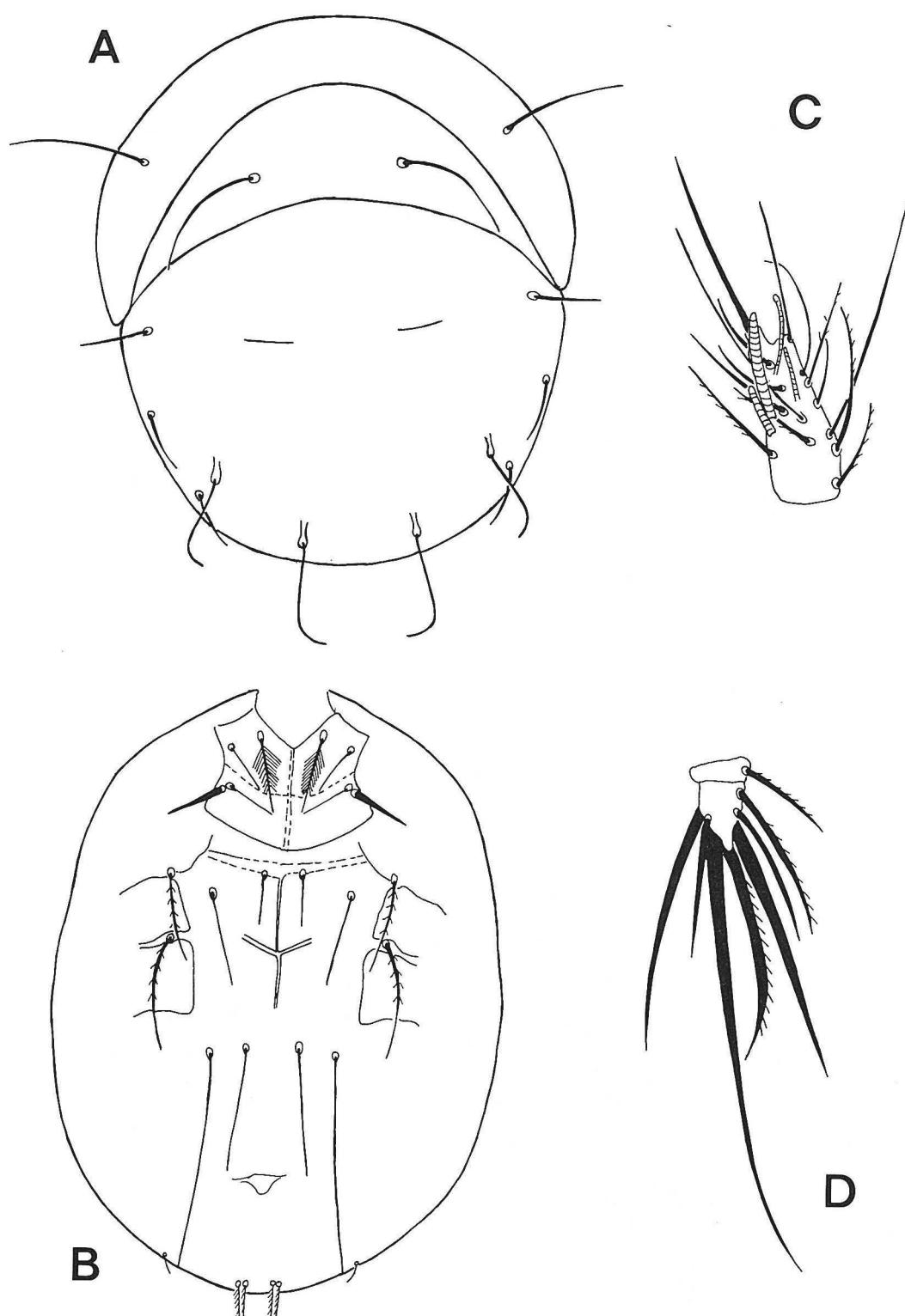


FIG. 3 : *Scutacarus offaliensis* sp. nov., female.  
 A. — Dorsal aspect. B. — Ventral aspect. C. — Tarsus I. D. — Tarsus IV.

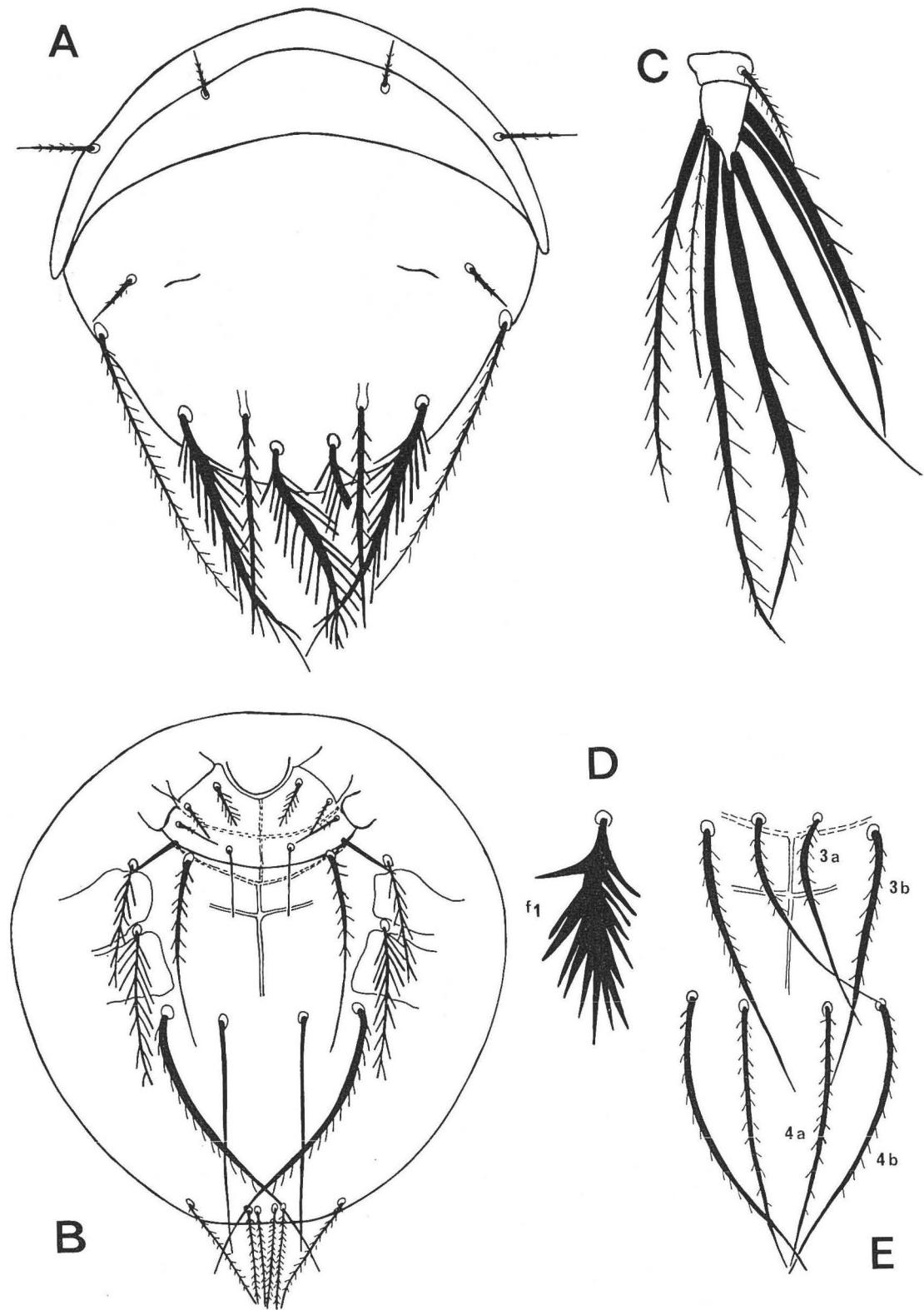


FIG. 4 A-C : *Scutacarus eucomus clonsasti* subsp. nov.  
A. — Dorsal aspect. B. — Ventral aspect. C. — Tarsus IV.

FIG. 4 D-E : *Scutacarus eucomus minimus* Rack, 1974.  
D. — Setae  $f_1$ . E. — Setae 3a, 3b, 4a, 4b.

#### ACKNOWLEDGEMENTS

**Scutacarus (Variatipes) eucomus clonsasti** subsp. nov.

■ FEMALE : length 144-148 $\mu$ m, breadth 138-141 $\mu$ m ; body circular.

*Dorsum* : (Fig. 4, a) : dorsal setae *c1* shorter than *c2* ; *d* as long as *c2* ; *e1* slightly longer than *f1* ; *e* longer than *f2*, all setae barbed, setae *f1* and *f2* strongly pectinate.

*Venter* : (Fig. 4, b) : epimeral setae *1a*, *1b* and *2a* are subequal in length, barbed ; *2b* saber-like, smooth ; *3a* short, simple ; *3b* long, strong and barbed ; *3c* shorter than *4c*, with long ciliation ; *4a* long, simple ; *4b* very strong, barbed and originating along a common transverse line with *4a*. Caudal setae *h1* and *h2* finely plumose, equal in length, *h3* long, plumose.

*Legs* : tibiotarsus I without claw. Tibiotarsus IV bearing seven setae (Fig. 4, c).

■ MALE : unknown.

*Holotype* : one female collected from grassland on reclaimed peat at Clonsast, Co. Offaly in April 1985.

*Remarks* : the new subspecies can be distinguished from the other subspecies (*Scutacarus eucomus minimus* Rack 1974), described from the Saalkreis near Halle by the form of setae *f1* ; by setae *3a* being short and simple and by setae *4a* being simple (Fig. 4, d & e).

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