

SURVEY ON THE FAMILY SCUTACARIDAE (ACARI) IN EGYPT. II

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ABSTRACT : Four new species of the genus *Scutacarus* (subgenus *Scutacarus*) are described and illustrated. These species are (*S.*) *unicosimilis*, (*S.*) *longiposimilis*, (*S.*) *zaherii* and (*S.*) *wisniewskii*. All were found in nests of the large ant, *Cataglyphus bicolor* Fab., and in soil.

INTRODUCTION

This paper is a continuation of my taxonomic survey of the family Scutacaridae in Egypt. It contains description of four new species of the genus *Scutacarus*, while the first paper reported four new species of *Archidispus* and *Imparipes*. The genus *Scutacarus* is world-wide in distribution and at present contains more than 200 species. MAHUNKA (1965) presented a key to the world species. The material used in this work is based on specimens from Sharkia and Giza province.

Genus *Scutacarus* Goeze 1780

According to KARAFIAT (1959) and MAHUNKA (1970), this genus is distinguished in having 4-segmented leg IV, usually with short tibiotarsus bearing six to eight setae, and without pretarsus, claws and empodium ; leg I usually with four segments. Subgenus *Scutacarus* Gros is recognized by the presence of claw on tibiotarsus I.

Scutacarus (*Scutacarus*) *unicosimilis* n. sp.

Female : Length 195 μ m, breadth 153 μ m, yellow-brownish, body oval to elongate, flattened.

Dorsum : (Fig. 1, a) : Clypeus large, wider than other idiosomatic segments, with free margin flat, broad distally and laterally. All dorso-idiosomatic setae barbed at their distal halves only, with exceptions of c_2 , e_2 and f_2 , which are smooth and simple ; e_2 the shortest ; setae c_1 , c_2 and d long, both of equal length ; f_1 the longest ; c_1 , e_1 and f_1 thicker.

Trichobothrium : Spines and setae very short ; sensillus smooth and oval-shaped.

Venter (Fig. 1, b) : Coxisternal plate sclerotized. Apodeme I strong ; II weak ; III incomplete. Posterior sternal plate wide, with anterior margin sinuated, arcuate with two antero-lateral corners. All ventral setae slightly barbed on one side, with exception of 2b and 4a, which are smooth. Setae 1a, 1b, 3a, 3c and 4c bowed ; 3c and 4c long ; 4a and 4b arising in a transverse line ; 4a the shortest ; 4b the longest and barbed

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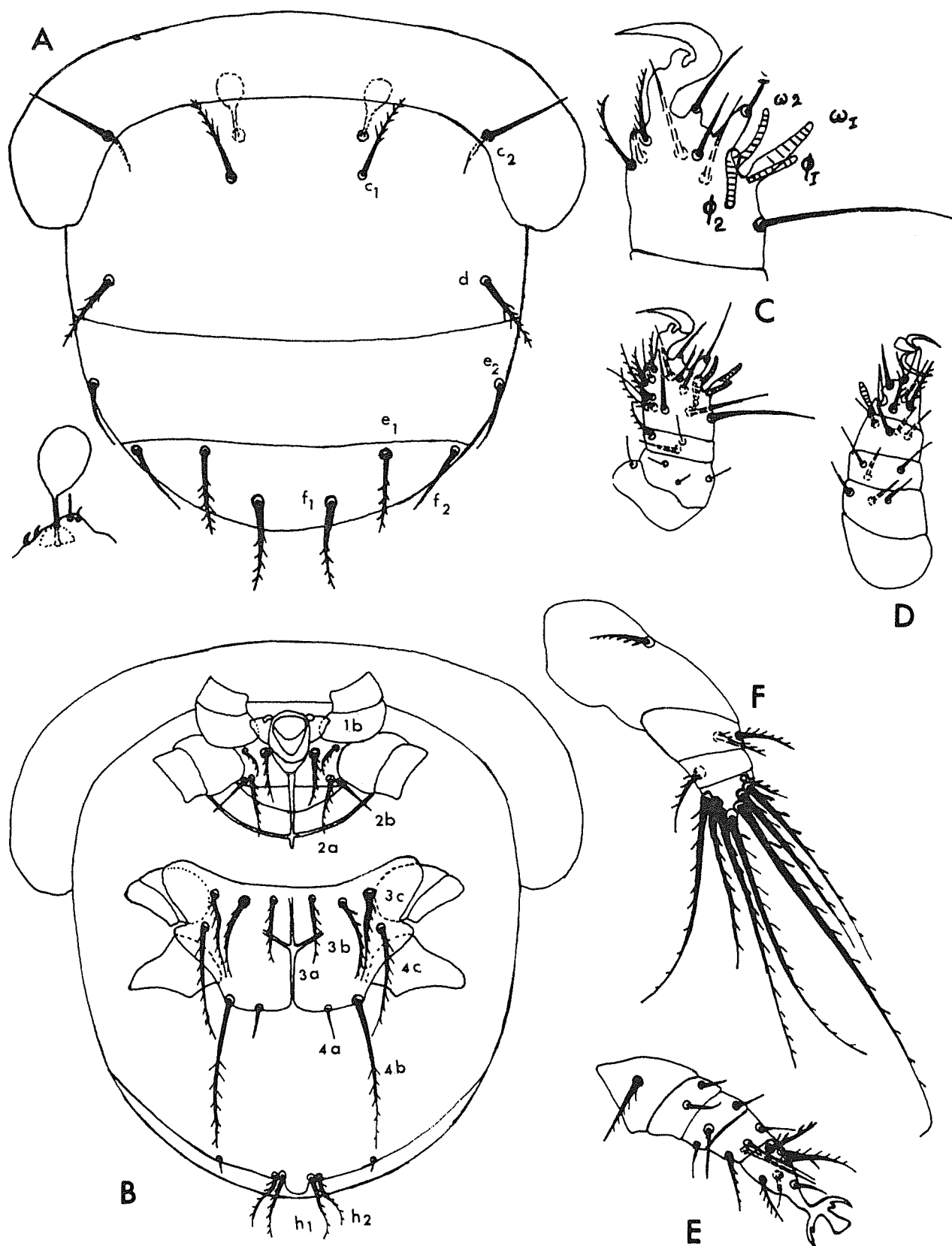


FIG. 1 : *Scutacarus unicosimilis* n. sp., female.

A. — Dorsal aspect with detail of trichobothrium. B. — Ventral aspect. C. — Leg I with details of the tarsus. D. — Leg II. E. — Leg III. F. — Leg IV.

distally. Three pairs of caudal setae, h_1 slightly longer than h_2 , both adjacent, h_3 , simple, hardly visible, rather removed from h_2 .

Legs : Tibiotarsus I with a large and stout pedicellate claw. Solenidion ω_1 stout, spur-form and the tallest ; ω_2 rodlike and arcuate ; φ_1 subclavate-shape ; φ_2 slender and rod-like. Tibiotarsus IV bears eight whipe-like ciliated setae. Configuration and chaetotaxy of leg I, II, III and IV as shown in Fig. 1 (c, d, e and f).

Male : Unknown.

Remarks : This species is close to *Scutacarus (S.) unicus* Delfinado 1976, but can be separated by having broader and flattened clypeus, by setae 4a and 4b in a transverse line, and by arcuate solenidion ω_2 and shortest solenidion φ_1 on tibiotarsus I.

Holotype : One female collected from decaying organic matter in a cultivated soil, at El-Badrashin Town, Giza Province.

Paratype : One female collected from nest of large ant *Cataglyphus bicolor* Fab. near bank of Canal at Zagazig town.

***Scutacarus (Scutacarus) longiposimilis* n. sp.**

Female : Length 252 μ m, breadth 195 μ m, yellow-reddish ; body circular.

Dorsum : (Fig. 2, a) : Clypeus large, with free margin wide, all dorsal setae simple, smooth. Setae c_1 arising posteriorly to c_2 ; d_1 , c_1 , c_2 of both of subequal length and the longest ; e_2 the shortest. Setae e_2 and f_2 bowed.

Trichobothrium : The spine and bothridial hairs long, sensillus smooth and circular.

Venter (Fig. 2, b) : Anterior and posterior sternal plate with well developed apodemes, the ante-

rior and posterior median apodemes (sternum and ventrum) strong and thick. Apodemes I and II complete ; III incomplete ; secondary transverse and posterior marginal apodeme associated with each other to form a trapezoidal shape. Posterior sternal plate broad, with a concave anterior margin and two antero-lateral angle corners acute. Among the ventral plumose setae, 1a, 3a and 3b of subequal length ; 2b shortest ; setae 4a and 4c long ; 4b the longest ; 1a heavily barbed distally ; 3a and 4a somewhat bowed. Three pairs of caudal setae, h_1 and h_2 long, thick, heavily ciliated ; h_3 minute, a quarter of length of h_1 .

Legs : Tibiotarsus I with well developed claw. Solenidion ω_1 robust and spur-form ; ω_2 rod-like ; both solenidion ω_1 and ω_2 of equal length. Solenidion φ_1 the tallest, rod-like solenidion φ_2 the shortest, subclavate-shape. Tibiotarsus of leg IV relatively long, bearing seven whipe-like plumose setae. Configuration and chaetotaxy of legs, I, II, III and IV as shown in Fig. 2 (c, d, e and f).

Remarks : This species is very near to *Scutacarus (S.) longitarsus dentatus* Mah. (1967) and *Scutacarus (S.) longipes* Rack (1975), but differs from them in having setae d_1 long and h_3 minute. It can be distinguished from *Scutacarus longipes* by the smooth sensillus and by solenidion ω_2 of tibiotarsus I which is rod-like.

Holotype : One female collected from cultivated soil in garden at Zagazig town, Sharkia Province.

Paratypes : Two females collected from decaying organic matter under cut trunk tree, at El-Badrashin town, Giza Province.

***Scutacarus (Scutacarus) zaherii* n. sp.¹**

Female : Idiosoma 228 μ long, 180 μ wide ; yellow-reddish body elliptical.

Dorsum (Fig. 3, a) : Clypeus large, with outer free margin broad distally. All dorso-idiosomatic

1. This species named in honour of prof. D. M. Abd. El. ZAHER head of Agricultural Zoology, Faculty of Agriculture, Cairo University.

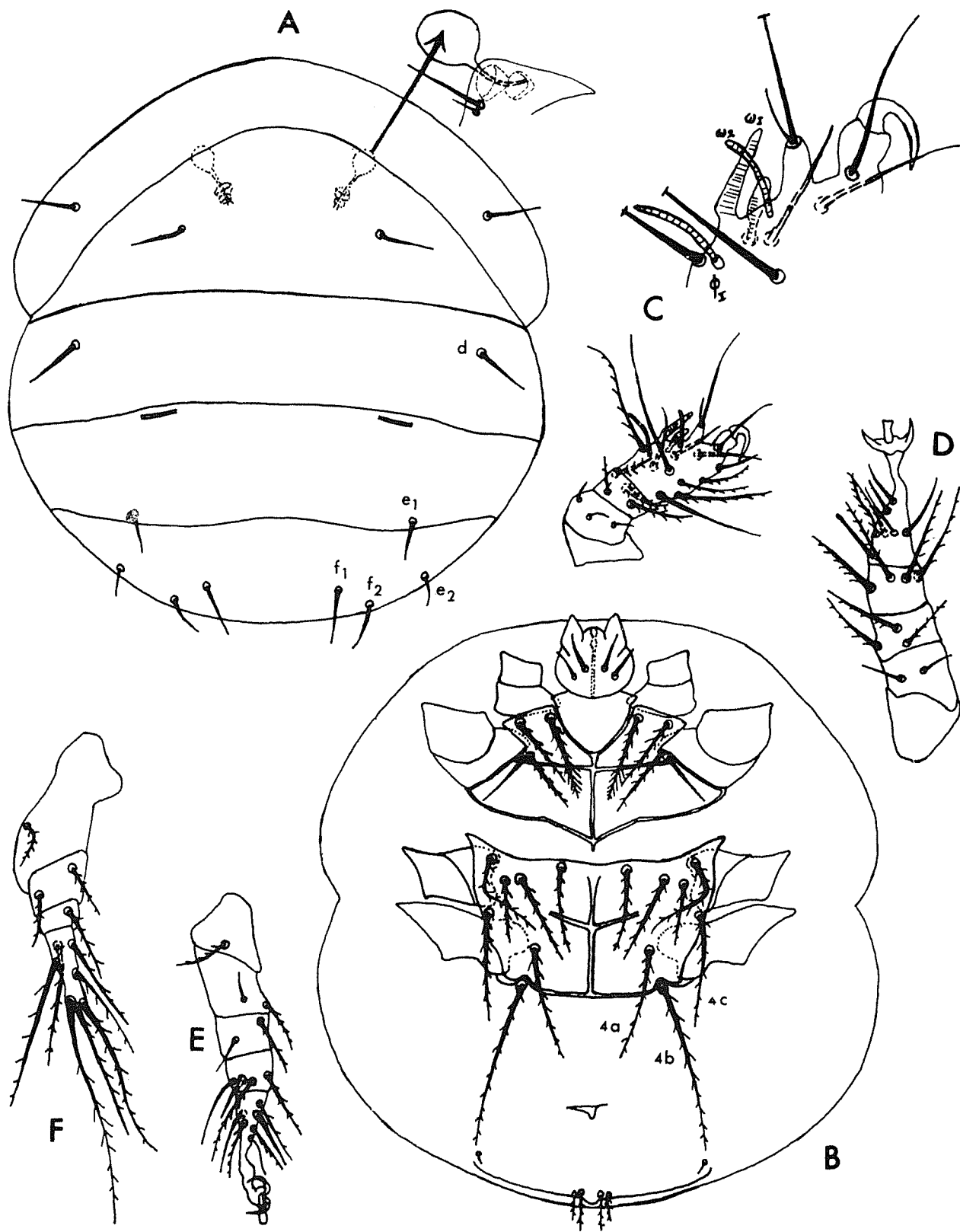


FIG. 2 : *Scutacarus longiposimilis* n. sp., female.

A. — Dorsal aspect with details of the trichobothrium. B. — Ventral aspect. C. — Leg I with details of the tarsus. D. — Leg II. E. — Leg III. F. — Leg IV.

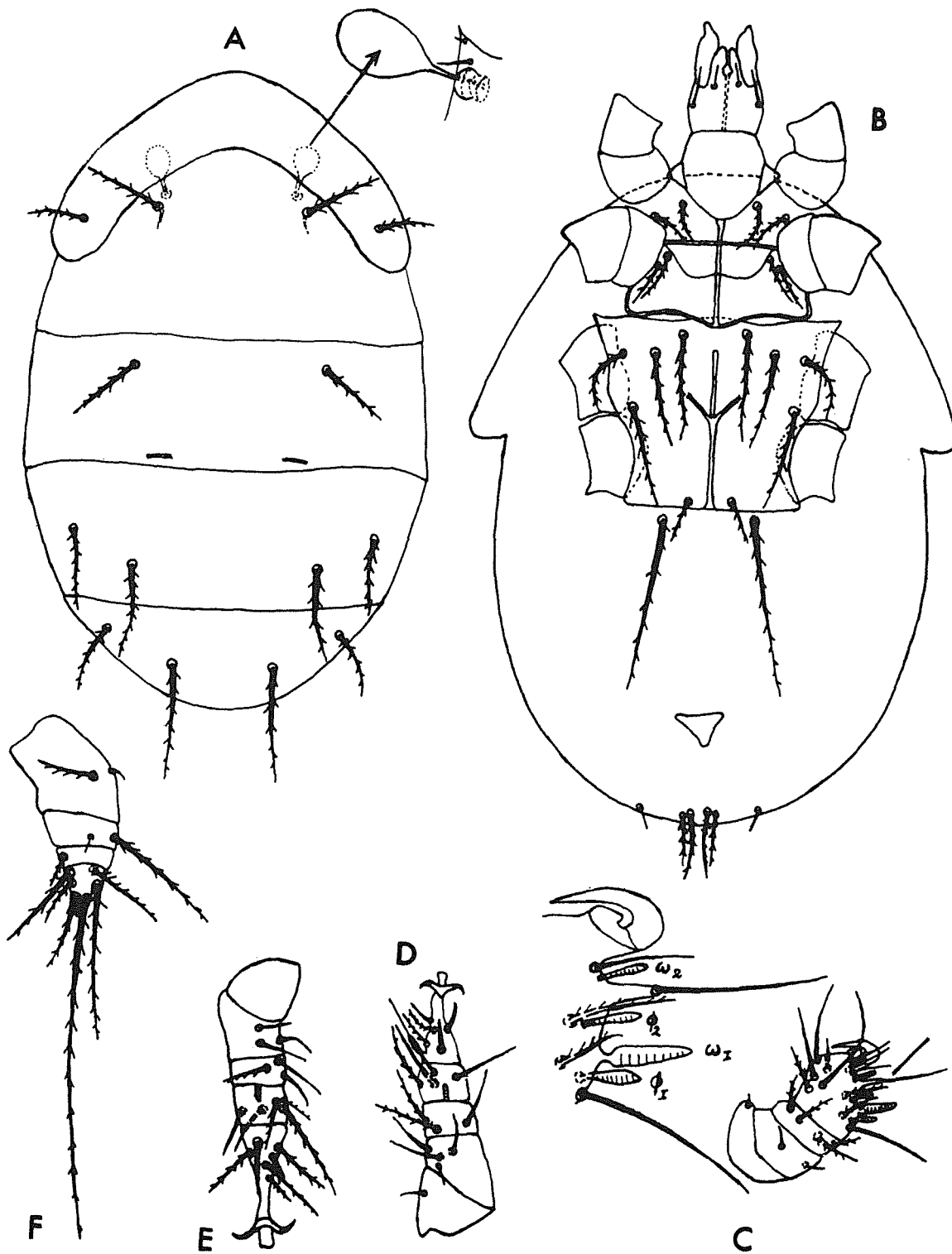


FIG. 3 : *Scutacarus zaherii* n. sp., female.

A. — Dorsal aspect with details of the trichobothrium. B. — Ventral aspect. C. — Leg I with details of the tarsus. D. — Leg II. E. — Leg III. F. — Leg IV.

setae moderately barbed. Setae c_1 arising anterior to, and longer than c_2 ; e_2 and f_2 the shortest, both of equal length; f_1 the longest.

Trichobothrium : The spines and bothridial hair very short, sensillus smooth and pear-form.

Venter (Fig. 3, b) : Coxisternal plate well developed. Apodeme I and II complete; posterior marginal and posterior median apodeme sclerotized. Posterior sternal plate wide, with anterior margin sinuated, which be arcuated with two antero-lateral acute angle corners. All ventral setae plumose, moderately barbed. Setae 1a, 1b, and 3c bowed; 1b the shortest; 3a and 4c long; 4a arising anterior to 4b, which be the longest. Three pairs of caudal setae, h_1 longer than h_2 , both adjacent, h_3 simple, smooth and rather removed from h_2 .

Legs : Tibiotarsus I flattened, with a large claw. Solenidion ω_1 stout spur-form and the tallest, solenidion ω_2 slender, the shortest; both solenidion φ_1 and φ_2 subclavate-shape; φ_1 slightly thicker and longer. Tibiotarsus IV conical, with six plumose setae. Configuration and chaetotaxy of leg I, II, III and IV as shown in (Fig. 3, c, d, e and f).

Male : Unknown.

Remarks : This species is similar to *Scutacarus (S.) abatus* Mah. (1968) and *Scutacarus (S.) kopolyi* Mah. (1969). But it can be recognized by having setae 1a simple; ventral setae moderately barbed, and by shapes and length of solenidion of tibiotarsus I.

Holotype : One female collected from cultivated soil in garden; at El-Badrashin town; Giza Province.

Paratype : One female collected with the same data.

Scutacarus (S.) wisniewskii * n. sp.

Female : Length 222 μ ; 162 μ width, yellow-reddish, body oval to elongate.

Dorsum (Fig. 4, a) : Clypeus large, with outer free margin wide distally. All dorsal setae slightly barbed with exception of setae e_2 and f_2 ; both being the shortest, smooth and simple. Setae c_1 arising anterior to c_2 ; c_1 the longest, e_1 and f_2 bowed.

Trichobothrium : The spines weak; bothridial setae short; sensillus smooth and round.

Venter (Fig. 4, b) : Coxisternal plate well developed; apodemes I strong; II weak; IV incomplete. Posterior sternal plate wide, with anterior margin concave, which be arcuated with two lateral angle corners. All ventral setae plumose; slightly barbed with exception of 2b and 4a. All setae of anterior and posterior sternal plate curved with exception of 4a and 4b. Setae 3a, 3b, 3c and 4c of equal length; 2a and 2b the shortest and both of equal length, 4a and 4b on a transverse line; 4b the longest, more than twice as long as 4c. Caudal setae h_1 and h_2 adjacent, barbed from one side only, both of h_1 and h_2 of subequal length; h_3 simple, minute and hardly visible.

Legs : Tibiotarsus I flat, with a well developed pedicellate claw. Solenidion ω_1 stout and spur shaped; solenidion ω_2 of subclavate shape; solenidion φ_1 shortest; solenidion φ_2 subclavate-shape; both solenidion ω_1 and φ_2 of equal length. Tibiotarsus IV relatively long, bears six whip-like plumose setae. Configuration and chaetotaxy of legs I, II, III and IV as shown in (Fig. 4, c, d, e and f).

Male : Unknown.

Remarks : This species is similar to *Scutacarus (S.) subcomosus* Mah. (1970) and *Scutacarus (S.) notabilis* Delfinado (1976), but can be distinguished by having setae 3a and 3b long and barbed,

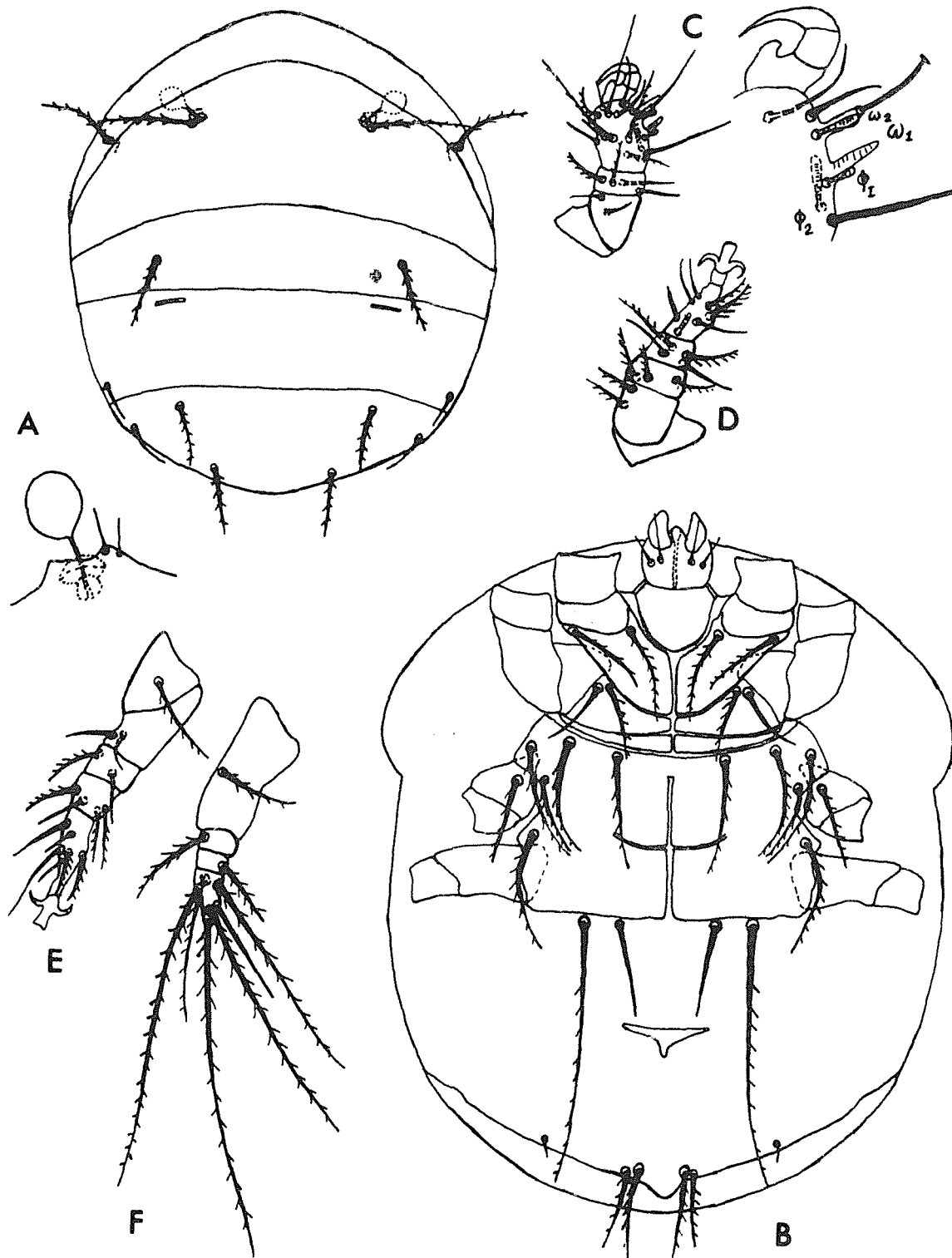


FIG. 4 : *Scutacarus wisniewskii* n. sp., female.

A. — Dorsal aspect with details of the trichobothrium. B. — Ventral aspect. C. — Leg I with details of the tarsus. D. — Leg II. E. — Leg III. F. — Leg IV.

by setae 4a reaching the posterior margin of the body, by shape and length of solenidia of tibiotarsus I, and by tibiotarsus IV bearing six whip-like setae.

Holotype : One female collected from nest of large ant *Cataglyphus bicolor* Fab. ; at bank of Canal, at El-Hawmdia town, Gize Province.

Paratype : One female with the same data.

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