

## NOTES ON GENERA *SAMSIKAKIA* VOLGIN, 1965 AND *METACHEYLETIA* FAIN, 1972 (ACARI: CHEYLETIDAE)

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----- ABSTRACT—The synonymy of *Cryptocheyla* Fain, 1972 and *Samsinakia* Volgin, 1965 (Cheyletidae) is confirmed. *S. volgini* (Fain, 1972) is redescribed and illustrated. Monotypic genus *Metacheyletia* Fain, 1972 (Cheyletidae) and *M. obesa* Fain, 1972, the type species, are redescribed and illustrated. A new subfamily Metacheyletiinae is erected for this unusual genus. -----

Genus *Samsinakia* Volgin, 1965

*Cryptocheyla* Fain, 1972.

Volgin (1965) created the genus *Samsinakia* for the species *Cheletophyes theodoridis* Samsinak, 1959. Fain (1972) described a new genus and species *Cryptocheyla volgini* apparently close to *S. theodoridis* but however distinct from it by several important characters, e. g.; a greater number of coxal setae (2-1-2-2 instead of 1-1-1-1 in *S. theodoridis*), the different shape of the guard seta of solenidion of tarsus I which is cylindroconical with very short barbs (this seta is fan-shaped and barbed in the species of Samsinak, the absence of numerous small setae on dorsum and the presence of only one basal tooth on the apical spine of palptibia (for 3 teeth in *S. theodoridis*).

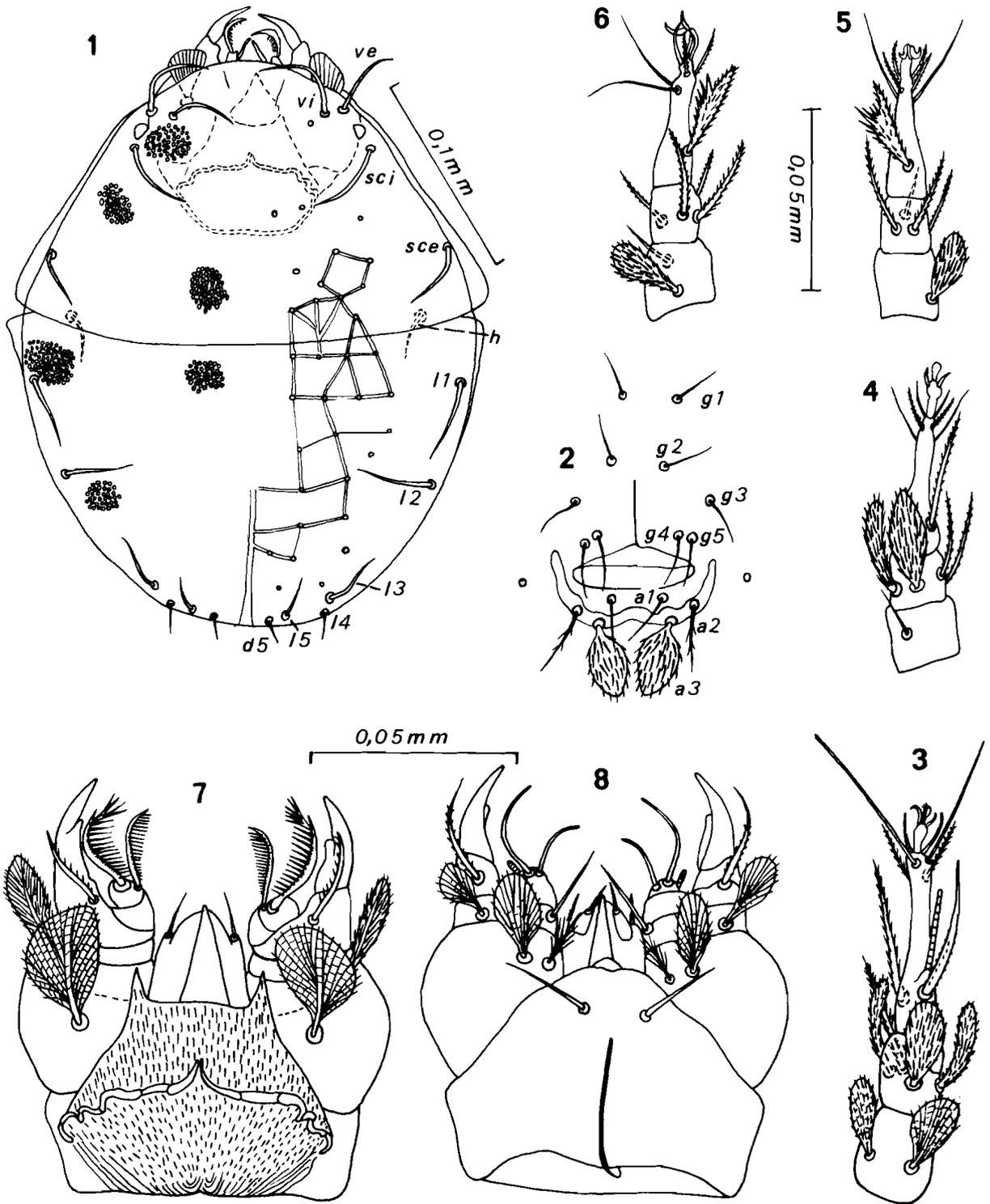
A third species, *S. pagongae* Corpuz-Raros and Sotto, 1977, has been attributed provisionally to the genus *Samsinakia*. The holotype was collected from sugarcane-rice litter in Philippine. Paratypes from *Citrus* spp. and from *Spondias mombin* L. in the Philippines. This species is distinguished from the two others by a different formula of coxal setae which are 2-2-2-2, by the more expanded shape of the dorso-lateral setae and by the very small length of the solenidion of tarsus I.

Fain (1979) synonymized *Cryptocheyla* with *Samsinakia* assuming that most of the differences observed between both genera were the result of misinterpretations in the description of *S. theodoridis*. Through the courtesy of Dr. K. Samsinak we have examined 2 paratype females of *S. theodoridis*. This study has revealed that our supposition was correct and that the two genera should not be separated. We give here a key to the 3 known species of *Samsinakia*.

### Key to the genus *Samsinakia* (females)

1. Coxae I-IV with 2-1-2-2 setae, anterior seta of coxa III fan-shaped and barbed; setae *vi*, *ve*, *sci*, *sc e*, *l1-l3*, *l5* and *h* cylindrico-conical, curved and with or without indistinct barbs; solenidion of tarsus I long ..... 2
- Coxae I-IV with 2-2-2-2 setae; anterior seta of coxa III thin and smooth; setae *vi*, *ve*, *sci*, *sc e*, *h*, *l1-l3*, *l5* club-shaped and distinctly barbed; solenidion of tarsus I very short ....  
..... *S. pagongae* Corpuz-Raros & Sotto, 1977
2. Guard seta of solenidion of tarsus I cylindrico-conical with very short barbs; all setae of tibiae III-IV thin, barbed; apical spine of palptibia with one tooth ..... *S. volgini* (Fain, 1972)
- Guard seta of solenidion of tarsus I fan-shaped, striated and densely barbed; tibiae III-IV with at least 2 fan-shaped, striated and barbed setae; apical spine of palptibia with 3 teeth  
..... *S. theodoridis* (Samsinak, 1959)

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Figs. 1-8: *Samsinakia volgini* (Fain, 1972) (holotype female)—1, dorsal view; 2, genito-anal area; 3, leg I; 4, leg II; 5, leg III; 6, leg IV; 7, dorsal gnathosoma; 8, ventral gnathosoma.

1. *Samsinakia theodoridis* (Samsinak, 1959)

In the 2 paratypes that we have examined the coxae I-IV bear 2-1-2-2 setae respectively. These setae are thin and smooth except the anterior seta of coxa III which is fan-shaped and barbed. This disposition and structure of setae is similar as in *S. volgini*.

Dorsum as in *S. volgini*, it is covered by 2 shields separated by a transverse furrow and bears a sculpture formed of very small rounded granular formations placed close together. Below the surface are numerous small scutal glands which are connected to each other by a network formed of thin canalicules. We have not seen the 52 pairs of small squamous setae covering the median parts of both dorsal shields (see Summers & Price, 1970). We surmise that these "setae" are in fact the scutal glands situated beneath the cuticular granules. The dorsal setae are displaced laterally, they are cylindrico-conical with very small indistinct barbs as in *S. volgini*. Setae *vi*, *ve*, *sci*, *sc e*, *l1-l5*, *d5* are present. The *h* seta is ventrolateral. The apical spine (improperly named "claw") of palptibia bears 3 small basal teeth. Tarsus I with a long solenidion and a fan-shaped, striated, and barbed guard-seta.

*S. volgini* is distinguished from *S. theodoridis* by the following characters: apical spine of palptibia with only one tooth; the guard-seta of solenidion of tarsus I is cylindrico-conical and very shortly barbed; tibiae III-IV with only slightly inflated or thin barbed setae (some, at least 2 of these setae are fan-like in *S. theodoridis*).

HOST AND LOCALITY—From beetles, *Selinus abacoides* Fairmoire, Tananarive, Madagascar.

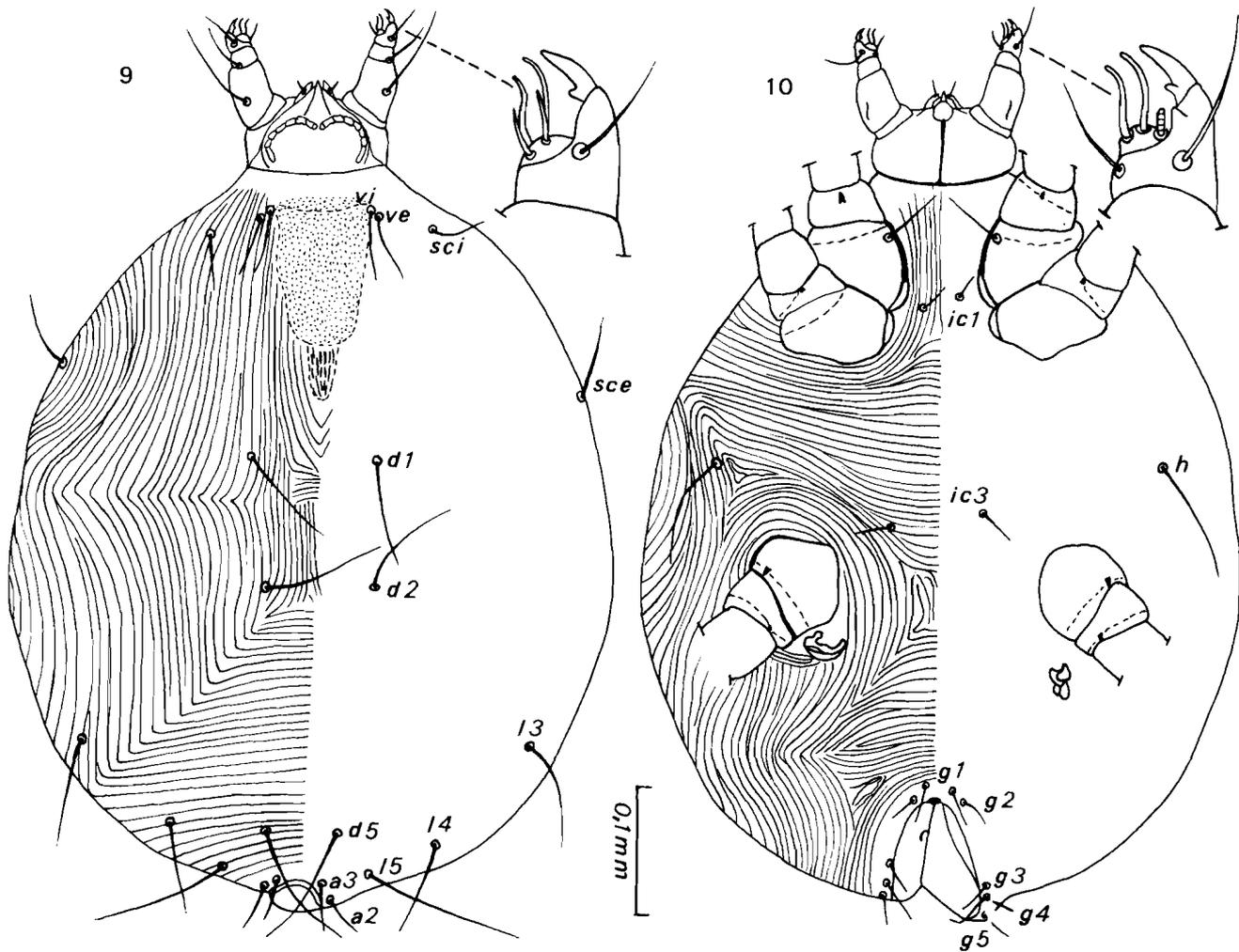
*Samsinakia volgini* (Fain, 1972) nov. comb.

*Cryptocheyla volgini* Fain, 1972.

FEMALE (Figs. 1-8)—Holotype 282 $\mu$ m and 225 $\mu$ m wide. The base of gnathosoma is completely ventral in un-compressed specimens. DORSUM—Completely covered by 2 shields separated by sejugal furrow and bearing a sculpture consisting of numerous very small rounded granular formations set close together. Below the surface there are numerous very small glandular pockets (scutal glands). These pockets are connected to each other by a network of thin canalicules. Propodosomal shield bears setae *vi*, *ve*, *sci* and *sc e*. Hysterosomal shield with 6 pairs of setae, either smooth or with very indistinct barbs and curved inside (e.g. *l1* to *l5* and *d5*). Eyes situated between *ve* and *sci*. Setae *d1-d4* are lacking. VENTER—Cuticle striated; coxae I-IV well formed, close to the midline, bearing 2-1-2-2 setae; these setae are thin and smooth except anterior seta of coxa III which is fan-shaped and barbed; between coxae are *ic1*, *ic3* and *ic4* setae; genital area with 5 pairs of genital setae; anus ventral, setae *a1* smooth and thin, setae *a2* barbed, setae *a3* flat, fan-shaped and shortly barbed. The *h* setae ventral and 45 $\mu$ m long; legs rather short, mostly ventral; all tarsi with two claws and a rayed empodium. CHAETOTAXY OF LEGS—Trochanters 1-1-2-1; femora 2-2-1-1; genua 2-2-2-2; tibiae 4-4-4-4; tarsi 8-7-7-7; tibia I with 2 fan-like setae, one barbed slightly inflated seta and 1 thin and long barbed seta; tibiae III-IV with 4 thin or slightly inflated barbed setae. SOLENIDIOTAXY—Tarsus I with a long  $\omega$ , the guard seta is thick, cylindricoconical, very shortly barbed and longer than  $\omega$ ; tarsus II with a ventral solenidion; tibia and genu I with a short solenidion. GNATHOSOMA—Peritreme almost transverse with 5-6 segments; palptibia with an apical spine bearing a large basal cylindrical tooth; 2 comblike setae bearing approximately 18-20 teeth, those of external comb thicker than those of internal comb.

MALE—Unknown.

HOST AND LOCALITY—(1) In the nest of *Spermestes cucullatus*, Butare, Rwanda, 27. I. 1970 (holotype and 1 paratype females) (Coll. A. Fain); holotype in Museum of Tervuren. (2) On venter of *Gonocephalum simplex* (Coleoptera, Tenebrionidae), Moanda, Zaire, 28. IV. 1970 (Coll. P. Elsen) (12 paratypes female).



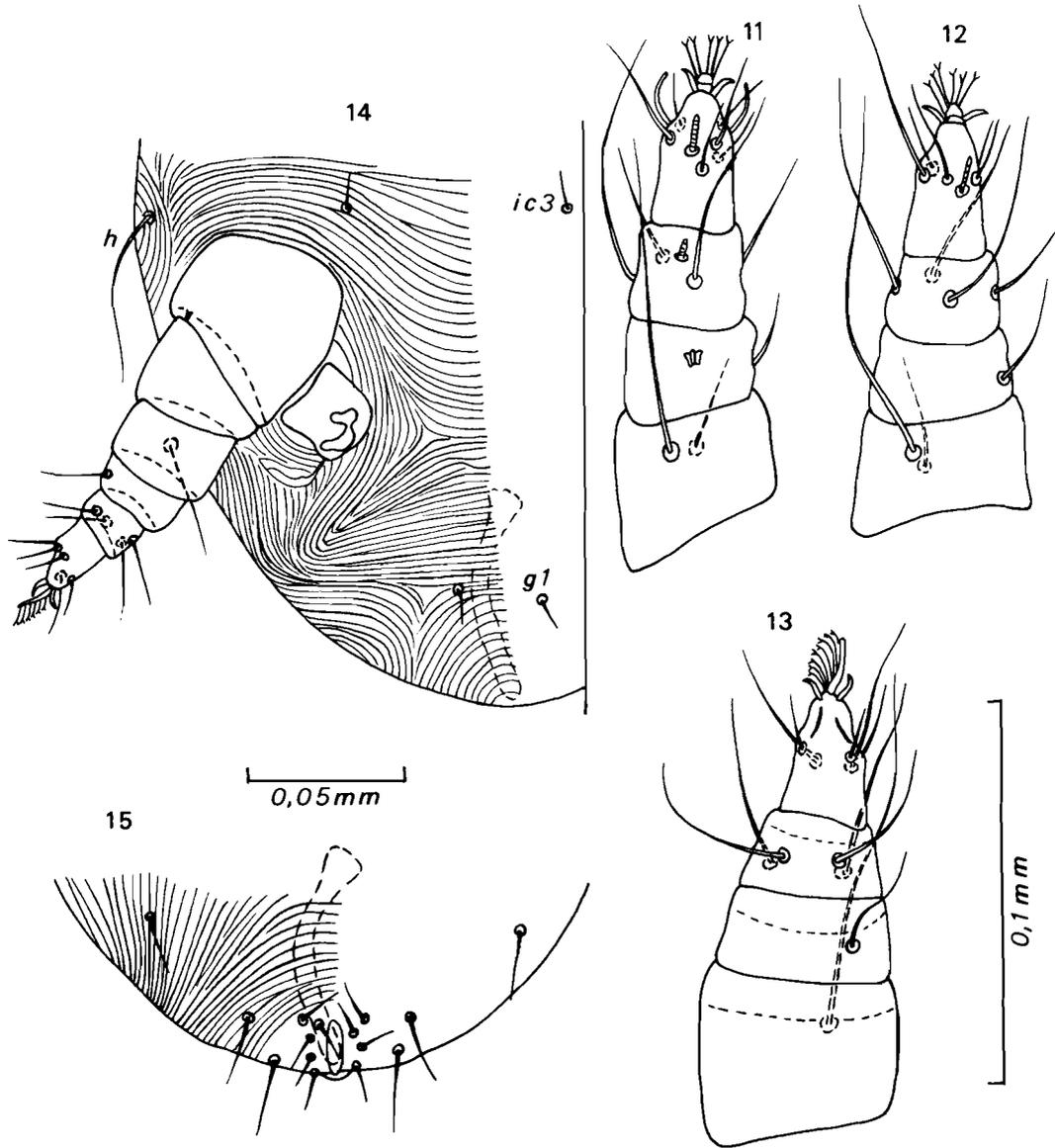
Figs. 9-10: *Metacheyletia obesa* Fain, 1972. (holotype female)—9, dorsal view; 10, ventral view.

#### Genus *Metacheyletia* Fain, 1972

**DEFINITION** (in both sexes)—Body subglobulous; cuticle finely striated; eyes absent; a small, punctate and poorly sclerotized propodonotal shield, with short and interrupted striations in its posterior third; 3 pairs of thick legs, 4th pair vestigial and replaced by a small irregular cuticular projection close to coxa IV; tarsi I-III with a pair of small claws and a rayed empodium; gnathosoma small, with relatively long and narrow palpi; peritreme with 7-8 segments at each side; palp-tibia with a small apical spine (=palpal claw) bearing one small basal tooth; palp-tarsus small, bearing 2 pairs of thick setae and a solenidion but without combs. **CHAETOTAXY**—Idiosoma (female). Setae *vi*, *ve*, *sci*, *sce*, *h*, *d1*, *d2*, *d5*, *l3*, *l4*, *l5*, *ic1*, *ic3*; coxae (I-III) 1-0-0, *g1*, *g2*, *g3*, *g4*, *g5*, *a2*, *a3*. Legs (I-III)—Trochanters 0-0-0, femora 2-2-1, genua 1-1-1, tibiae 4-4-4, tarsi 8-5-5. All the idiosomal and leg setae smooth. **SOLENIOTAXY**—Tarsi 1-1-0, tibiae 1-0-0, genua 1-0-0. The solenidion of tarsus II dorsal as in tarsus I.

**TYPE SPECIES**—*Metacheyletia obesa* Fain, 1972.

This genus is probably the most regressed and thus the most evolved of all the Cheyletidae *s. lat.* There are only 3 pairs of legs, the 4th pair is vestigial. The idiosomal and leg chaetotaxy is strongly reduced, especially on the coxae and the trochanters. The palptarsus is small and



Figs. 11-15: *Metacheyletia obesa* Fain, 1972.—11, holotype female legs I dorsally; 12, holotype female legs II dorsally; holotype female legs III ventrally; 14, allotype male opisthogaster; 15, allotype male opisthonotum.

devoid of combs. Owing to the very special characters of this genus we think necessary to erect for it a new subfamily.

Subfamily *Metacheyletiinae* n. subfam.

DEFINITION—With the characters of the genus.

TYPE GENUS—*Metacheyletia* Fain, 1972.

*Metacheyletia obesa* Fain, 1972

FEMALE (Figs. 9-13)—Idiosoma in the holotype 585 $\mu$ m long and 455 $\mu$ m wide. DORSUM-Propodonotal shield longer (155 $\mu$ m) than wide. Dorsal setae very thin and smooth, relatively

short. VENTER—Coxae I and II contiguous, coxa III very far from coxa II; vulva terminoventral; anus terminal; gnathosoma with a short base, wider than long; palpi longer than wide; legs thick; other characters as mentioned in the definition of genus.

MALE (Figs. 14-15)—Idiosoma  $295\mu\text{m}$  long and  $210\mu\text{m}$  wide. Resembles closely the female except for genital chaetotaxy and the presence of a tubular aedeagus  $70\mu\text{m}$  long.

HOST AND LOCALITY—In the quill of remige-feathers of *Psittacula* sp. which died in the Antwerp Zoo (holotype and 4 paratype females, allotype male). Types in Institut royal des Sciences naturelles, Bruxelles, Belgium.

#### ACKNOWLEDGEMENTS

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