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*Teinocheylus gundii* spec. nov.  
from *Ctenodactylus gundi*  
(Acari, Cheyletidae)

by A. FAIN (1), P. GERRITS (2) and F.S. LUKOSCHUS (2)

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INTRODUCTION

The genus *Teinocheylus* Fain, 1974 was represented so far only by the type species *T. longissimus* described from *Pectinator spekei* (Rodentia, Ctenodactylidae) in Somaliland.

A new species belonging to this genus is described herein, *T. gundii* sp. n. It has been found by F.S.L. on *Ctenodactylus gundi* in Tunisia (Coll. I. Vesmanis).

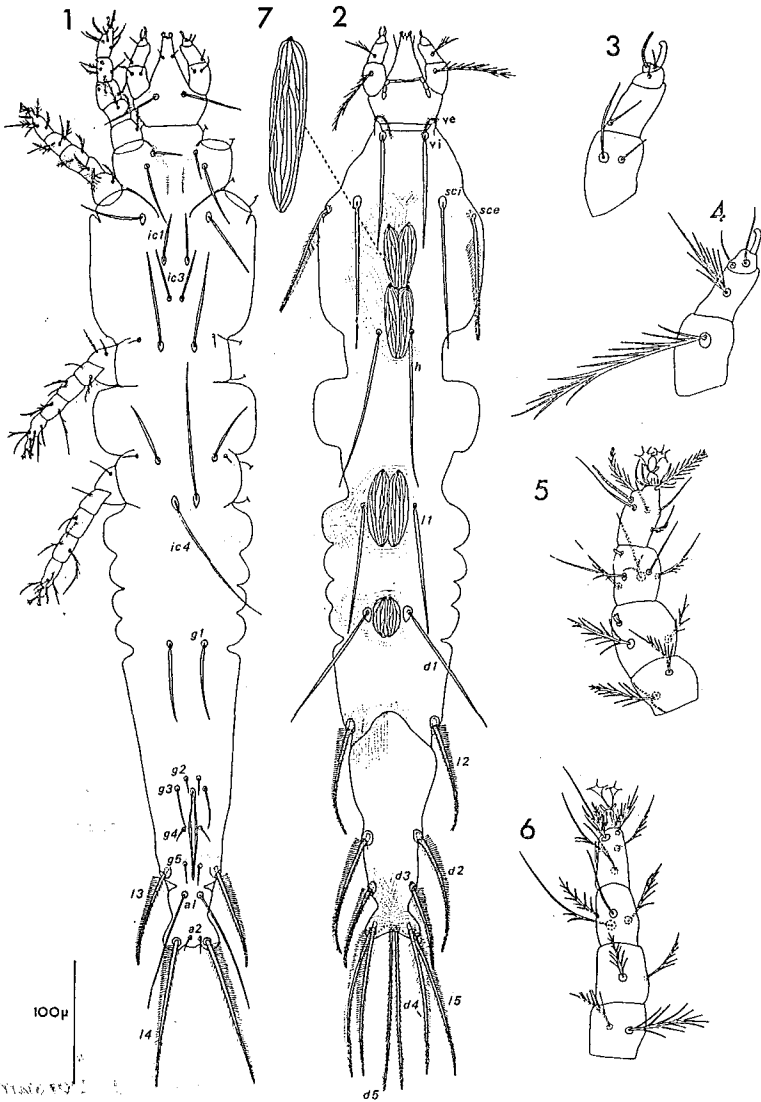
The discovery of all the immature stages of this species allows us to describe for the first time the life-cycle of this genus.

The genus *Teinocheylus* has been placed by Fain (1974) in a new tribe Teinocheylini, close to the Cheletosomatini Volgin (Cheyletinae). Smiley in 1977 has given to this tribe the subfamily rank in the Cheyletiellidae. As the suprageneric names are coordinate, the name of this taxon should become Teinocheylinae Fain, 1974 (family Cheyletidae). We have discussed earlier the status of the Cheyletiellidae and have proposed to conserve in this family only the genera *Cheyletiella* and *Eucheyletiella* (Fain, 1979a and 1980).

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Figs. 1-7. — *Teinocheylus gundii* sp. n. Female. - 1 and 2. In ventral and dorsal view; - 3 and 4. Palp, in ventral and dorsal view; - 5 and 6. Legs I and II in dorsal view; - 7. Median setae of propodeonotum.

We believe that the genus *Teinocheylus* is specialized for the rodents of the family Ctenodactylidae.

Genus **TEINOCHEYLUS** Fain, 1974

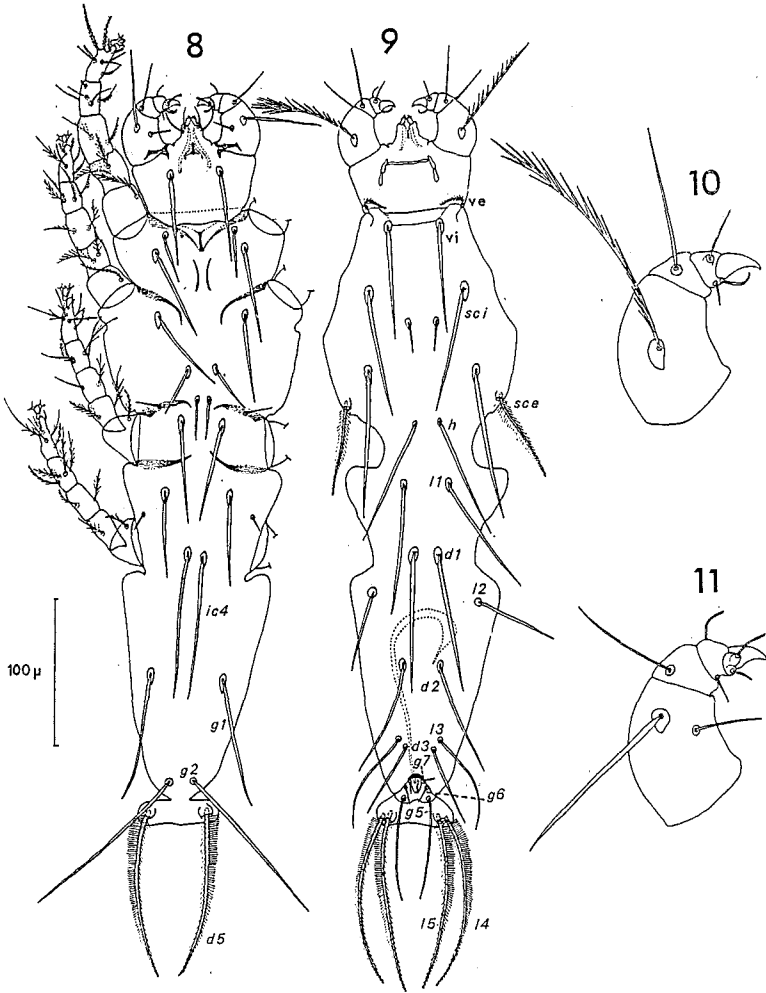
*Definition*: The original definition was based only on the female. The male is relatively shorter and wider than the female. It has a stronger palp and a palptibial spine and is devoid of foliate setae on dorsal surface of body. The penis is long and strongly curved in its proximal half. Tritonymph and protonymph with the gnathosomal base strongly prolonged forwards in a long snout, especially in protonymph. Larva strongly regressed without gnathosoma and with vestigial legs represented by 3 pairs of short rounded tubercles. Prelarva represented by a membranous sac bearing a pair of small apical hooks, serving as ecdysal organs, as in the Myobiidae.

*Life-cycle*: Egg-prelarva-inactive and regressed larva-active protonymph-active tritonymph-adults. The male develops from a protonymph which is identical to the protonymph of the female line. The female develops into a tritonymph.

*Setal nomenclature* (female): Fain (1979b) has proposed a system of nomenclature for the idiosomal chaetotaxy in 11 genera of Cheyletidae and Cheyletiellidae. This system is used herein for *Teinocheylus*. In this genus some setae have migrated and become either more median (*h* setae) or more posterior (*ic* 1) than in the other genera of Cheyletidae. Moreover there are 4 pairs of neotrichial setae (the paramedian foliate setae). In the tritonymph the setae *ic* 1 are in normal position (at level of coxae I) and *h* is more lateral.

***Teinocheylus gundii*** spec. nov.

*Female* (Figs 1-7): Holotype 745  $\mu$  long (including gnathosoma) and 134  $\mu$  wide. In 10 paratypes 690-807  $\mu$  long (average 767,5  $\mu$ ) and 140-164  $\mu$  wide (average 148,6  $\mu$ ). Cuticle poorly sclerotized. *Dorsum*: A distinct transverse furrow is present in the middle of opisthonotum. Cuticle mainly striated transversely except in three median slightly depressed areas bearing four pairs of foliate longitudinally-striate setae, and in the posterior part of dorsum. The two anterior pairs of foliate setae are 61-62  $\mu$  long and 13-14  $\mu$  wide. The two more posterior pairs of foliate setae are 64  $\times$  18  $\mu$  and 33  $\times$  12  $\mu$  (length and



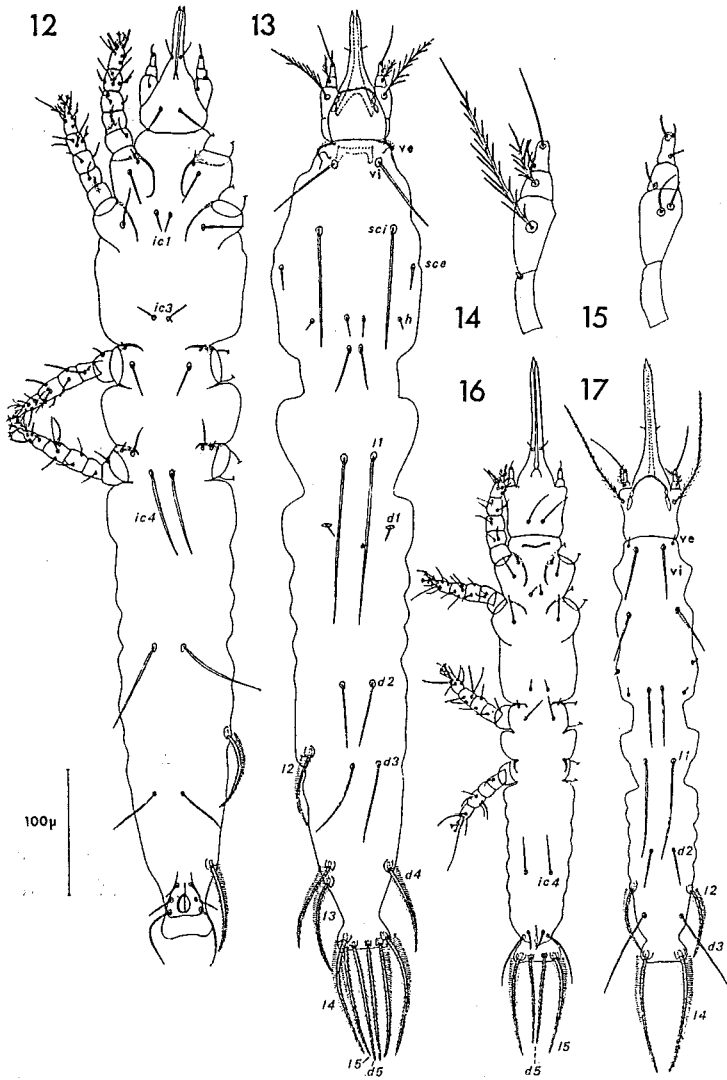
Figs. 8-11. — *Teinocheylus gundii* sp. n. Male. - 8 and 9. In ventral and dorsal view; - 10 and 11; Palps in dorsal and ventral view.

width) respectively. These foliate setae are neotrichial. *Venter*: Sternum absent, all epimeres poorly sclerotized and separate. Vulva postero-ventral. Anus not observed.

*Idiosomal chaetotaxy*: (length of setae): *vi* 96  $\mu$ , *ve* 22  $\mu$ , *sci* 122  $\mu$ , *sce* 105  $\mu$ , *h* 135  $\mu$ , *d* 1 123  $\mu$ , *d* 2 111  $\mu$ , *d* 3 75  $\mu$ , *d* 4 135  $\mu$ , *l* 1 113  $\mu$ , *l* 2 103  $\mu$ , *l* 3 115  $\mu$ , *l* 4 135  $\mu$  and *l* 5 135  $\mu$ . All the setae situated laterally (*ve*, *sce*, *d* 2, *d* 3, *d* 4, *l* 2, *l* 3, *l* 4, *l* 5) and *d* 5 paramedian are barbed. The other setae are bare. *Gnathosoma*: Palps with 4 free segments; femur with a dorsal barbed seta and 2 bare ventral setae; genu with one barbed dorsal and a bare ventral seta; tibia small with a curved apical spine and 3 short bare seta; tarsus very small, rounded, with a solenidion and a short bare seta. Peritremes as in *T. longissimus*. *Legs*: with 5 free segments, similar to the legs of *T. longissimus*. *Chaetotaxy of legs*: tarsi 9-7-7-7; tibiae 5-4-4-4, genua 2-2-2-2, femora 2-2-2-1, trochanters 1-1-1-1, coxae 2-1-2-2. Most of the setae are barbed. *Solenidiotaxy*: tarsi 1-1-0-0, tibiae and genua 1-0-0-0.

*Male* (Figs. 8-11): Allotype 491  $\mu$  long, 140  $\mu$  wide (idiosoma). In 3 paratypes, length 503-538  $\mu$ , width 129-140  $\mu$ . *Dorsum*: Foliate setae absent but there are 2 neotrichial pairs of bare setae, a median pair 24  $\mu$  and a lateral pair 102  $\mu$  long. Genital orifice close to posterior extremity, surrounded by 3 unequal setae. Penis long, with anterior half curved. *Venter*: Epimeres I fused in a short sclerotized sternum. Behind the sternum are 2 paramedian slightly curved sclerites. Epimeres II and III more sclerotized than in female. Epimerites III well formed. *Gnathosoma*: larger than in female with stronger palps, but with a much smaller median prolongation than in female. The dorsal seta of palpgenu is bare. Apical spine of palptibia very thick and strong. Legs striated transversely. Chaetotaxy as in female except that tibia I bears only 4 setae. Solenidiotaxy as in female.

*Tritonymph* (Figs. 12-15): Length 745  $\mu$ , width 131  $\mu$  (gnathosoma included). Average in 3 paratypes 652  $\times$  102  $\mu$ . *Dorsum*: as in female but without depressed areas and foliate setae. *Venter*: all epimeres free. Anus subterminal ventral, surrounded by 3 pairs of anal setae. *Chaetotaxy of idiosoma*: resembles that of female but there are no foliate setae in the middle of dorsum. The neotrichial setae are thin and bare. The *h* and *d* 1 setae are very short and bare. *Lengths of setae*: *ve* 31  $\mu$ , *vi* 64  $\mu$ , *sci* 81  $\mu$ , *sce* 14  $\mu$ , *h* 9  $\mu$ , *d* 1 12  $\mu$ , *d* 2 58  $\mu$ , *d* 3 63  $\mu$ , *d* 4 105  $\mu$ , *d* 5 97  $\mu$ , *l* 2 66  $\mu$ , *l* 3 91  $\mu$ , *l* 4 98  $\mu$ , *l* 5 97  $\mu$ . *Gnathosoma*: small



Figs. 12-17. — *Teinocheylus gundii* sp. n. - 12-15. Tritonymph: 12 and 13. In ventral and dorsal view; 14 and 15. Palps in dorsal and ventral view; - 16 and 17. Protonymph in ventral and dorsal view.

with a long anteromedian snoutlike projection. Palps small, striated transversely, with 4 free segments, the tarsus being fused with the tibia. There is no apical « claw ». *Legs*: striated transversely smaller than in female.

*Protonymph* (Figs 16-17): Length (including gnathosoma) 480  $\mu$ , width 82  $\mu$ . Average in 6 paratypes 655  $\mu \times 105 \mu$ . Dorsum as in tritonymph except that some setae are lacking (*d* 1, *d* 4, *l* 3, and one neotrichial pair). Venter as in tritonymph but the coxals IV, and one pair of anals are missing. The snout of the gnathosoma is very long and narrow. Palps small. *Legs* normally developed but smaller than in tritonymph. *Chaetotaxy*: tarsi 9-7-7-5, tibiae 4-4-4-4, genua 2-2-2-0, femora 2-2-1-1, trochanters 0-0-1-0, coxae 2-1-2-0.

*Larva* (Figs. 21-23): Length 482  $\mu$ , width 73  $\mu$ . Average in 8 paratypes 481  $\mu \times 72 \mu$ . *Legs* represented by small rounded sclerotized and rounded structures. Other structures absent. The larvae are enclosed in the prelarval skin and have no free life.

*Prelarva* (Figs 19-20): Length 423  $\mu$ , width 58  $\mu$ . Average of 6 paratypes 444  $\mu \times 66 \mu$ . The prelarva has a striated cuticle and is enclosed in the egg. At one extremity it bears 2 small triangular sclerites serving for the breaking of the egg shell.

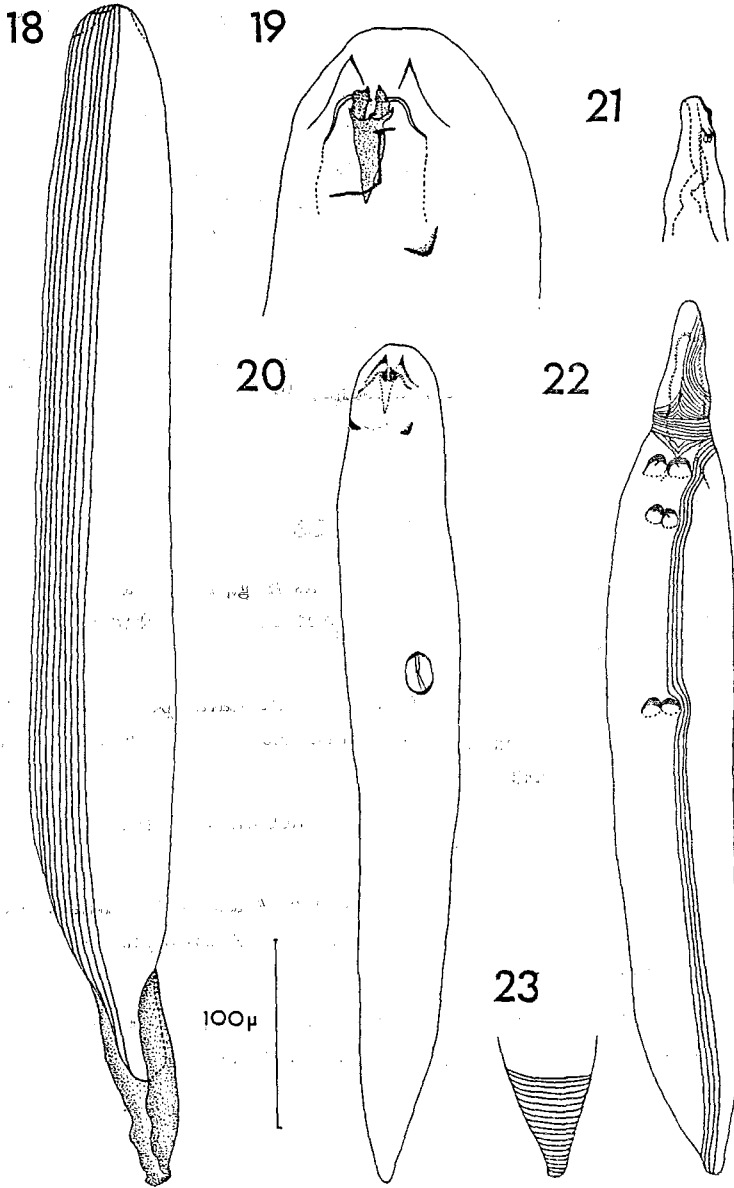
*Egg* (Fig. 18): Length 538  $\mu$ , width 77  $\mu$  (average of 7 eggs). External surface longitudinally striated. The egg is attached to the hair of the host by one of its extremity.

*Remark*: This species is distinguished from *T. longissimus* by the wider shape of the foliate dorsal setae, the small length of the *sce* and the *h* setae, the different shape of solenidion of genu I.

#### *Host and locality*:

1. Holotype and 11 paratypes female, allotype and 4 paratypes male from *Ctenodactylus gundi*, Chebikar, Tunisia, 12.III.1973 (Coll. I. Vesmanis). This animal is conserved in the Senckenberg Institute, Frankfurt, Germany. Mites collected by F.S.L. Other paratypes from the same host: 3 tritonymphs, 6 protonymphs, 19 larvae and 16 eggs. The mites were attached to the hairs of the head, as for *T. longissimus*. Holotype in Forschungsinstitut Senckenberg, Frankfurt a.M. Paratypes (male and female) in the Musée de Tervuren and in the collection of authors.





Figs. 18-22. — *Teinocheylus gundii* sp. n. - 18. Egg; - 19 and 20. Prelarva; - 21-23. Larva.

2. Other specimens (4 females, 1 male, 3 tritonymphs and 3 protonymphs) from *Ctenodactylus vali*, Beni Abbès, Algeria, May 1966, Peter leg. Host in the Museum national d'Histoire naturelle, Paris.

We also found eggs, exuvies and nymphs of *Teinocheylus* sp. on the dried skins of two other hosts of the collection of the Smithsonian Institution: on *Massouteria mzabi* (host no. 482510), Tammanrasset, Oasis Province, Algeria, 18 March 1966 (Coll. L. Robins) and on *Felovia vae* (host no. 402147), Passe de Soufa, Sahel Savanna, Mauretania, 26 May 1967 (Coll. C. Robbus).

According to these observation it appears that the genus *Teinocheylus* is specialized for the rodents of the family Ctenodactylidae. In all the hosts the mites were attached to the hairs in front of the ears.

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