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NEW ENDOFOLLICULAR OR SUBCUTANEOUS  
HYPOPI FROM MAMMALS  
(ACARINA : ASTIGMATA)

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NEW ENDOFOLLICULAR OR SUBCUTANEOUS HYPOPI FROM MAMMALS  
(ACARINA : ASTIGMATA)

BY

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We describe here 2 new genera and 6 new species of heteromorphic deutonymphs (= hypopi) discovered on various mammals, by the junior author.

Some of these species were found under the skin, the others in the hair follicles.

FAMILY GLYCYPHAGIDAE Berlese, 1887

SUBFAMILY METALABIDOPHORINAE Fain, 1967

Genus *Neolabidophorus* Pence and Genoways, 1974

This genus is characterized by the presence of a very small and sclerotized clasping organ, the normal oval or rounded shape of the genital suckers which are displaced laterally, the absence of claws on tarsi III and IV, the absence of solenidia *alpha* and of *v e* setae, the drastic reduction of the idiosomal chaetotaxy.

The new species that we describe here differs from the single species known in the genus (*N. yucatanensis*) by the presence of small finely verrucous surelevations on the cuticle of the region situated in front of the epimera I, the greater length and the more basal situation of  $\omega r$  of tarsus I, the poor sclerotization of the anterior epimera, the more numerous setae on the legs, the edentate structure of the tibial and genual spines I-II.

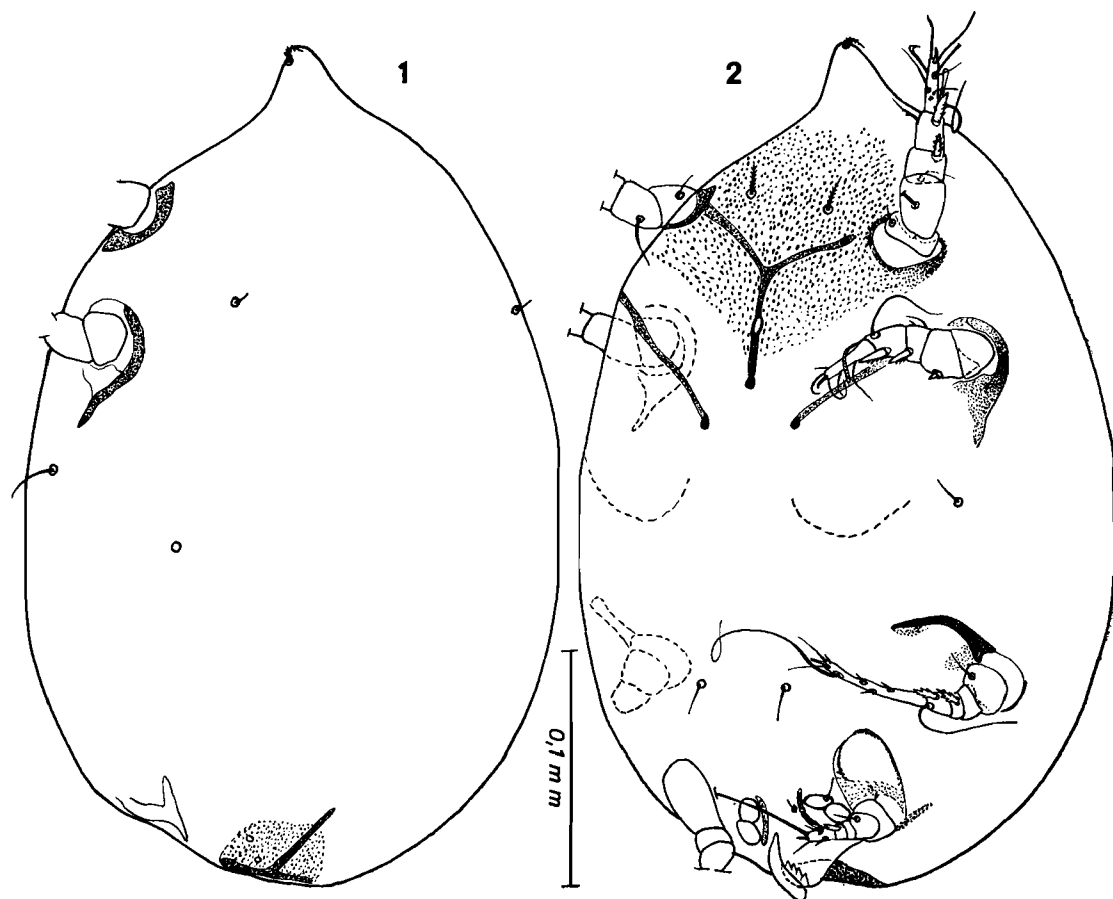
***Neolabidophorus verrucosus* spec. nov.**

*Hypopus* (fig. 1-5) : Holotype 345  $\mu$  long, 215  $\mu$  wide (in oblique position). Cuticle poorly sclerotized except the antero ventral region, the median and the posterior regions of the dorsum, the latter bearing a small punctate shield. There is a sclerotized plate behind the clasper organ. The tarsi I-IV are 22, 23, 45 and 15  $\mu$  long respectively. The  $\omega r$  of tarsi I and II are 15  $\mu$  and 21  $\mu$  long.

*Leg chaetotaxy* (I-IV) (solenidia not included) : Tarsie 6—6—8—6. Tibia 2—2—1—1. Genua 2—2—1—0. Femora 1—1—0—1. Trochanters 1—1—1—0.

*Host and locality*

On *Perognathus penicillatus*, Mexico 1895. Animal in the Museum d'Histoire naturelle, Paris (1895-64) (Holotype). Type in this Museum.



FIGS. 1-2 : *Neolabidophorus verrucosus* sp. n. Holotype hypopus : 1) dorsum ; 2) venter.

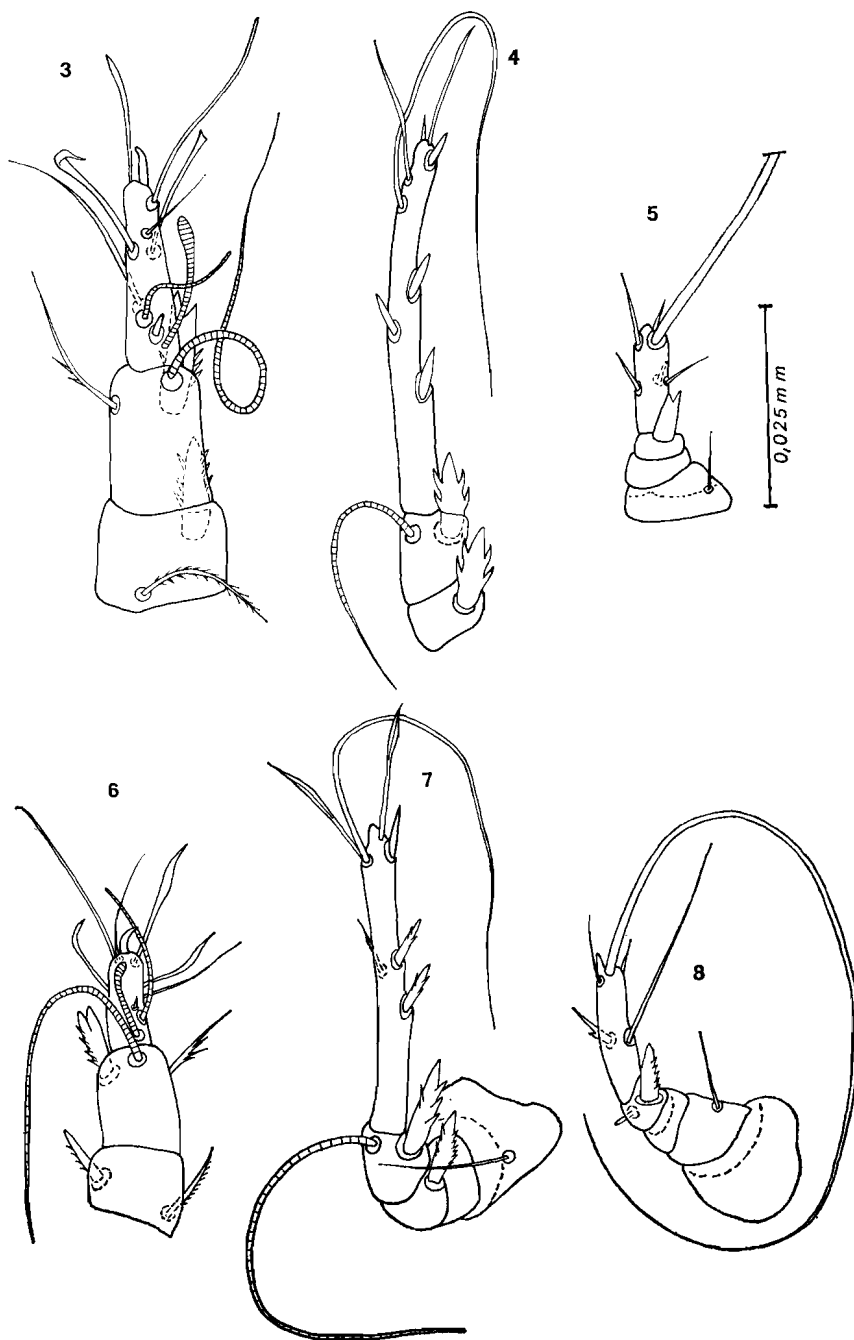
Genus **Dipodomyopus** gen. nov.

*Definition* : This genus is distinguished from the related genera *Metalabidophorus* Fain, *Microlabidopus* Fain and *Neolabidophorus* Pence by the different shape of the clasping folds which are long and narrow and only attached by means of their bases, the rest being free and passing beyond the posterior border of the body. The internal surface of these folds bears a club shaped and ridged clasper. Another pair of smaller ridged claspers is present behind the anus. The genital suckers are normal in shape but they are slightly displaced laterally and divergent. Dorsally, the posterior region of hysterostoma bears a small punctate area reinforced by a sclerotized structure in the shape of an inverted T. Tarsi I-II with a non-pedunculated claw. Tarsi III and IV without claws. Tibial setae III-IV and genual setae III in the shape of thick conical barbed spines. The *ve* setae are lacking.

*Type species* : *Dipodomyopus tuttlei* sp. n.

**Dipodomyopus tuttlei** spec. nov.

This species is known only from the hypopial stage. It is named after our friend Dr. D. TUTTLE, University of Arizona.

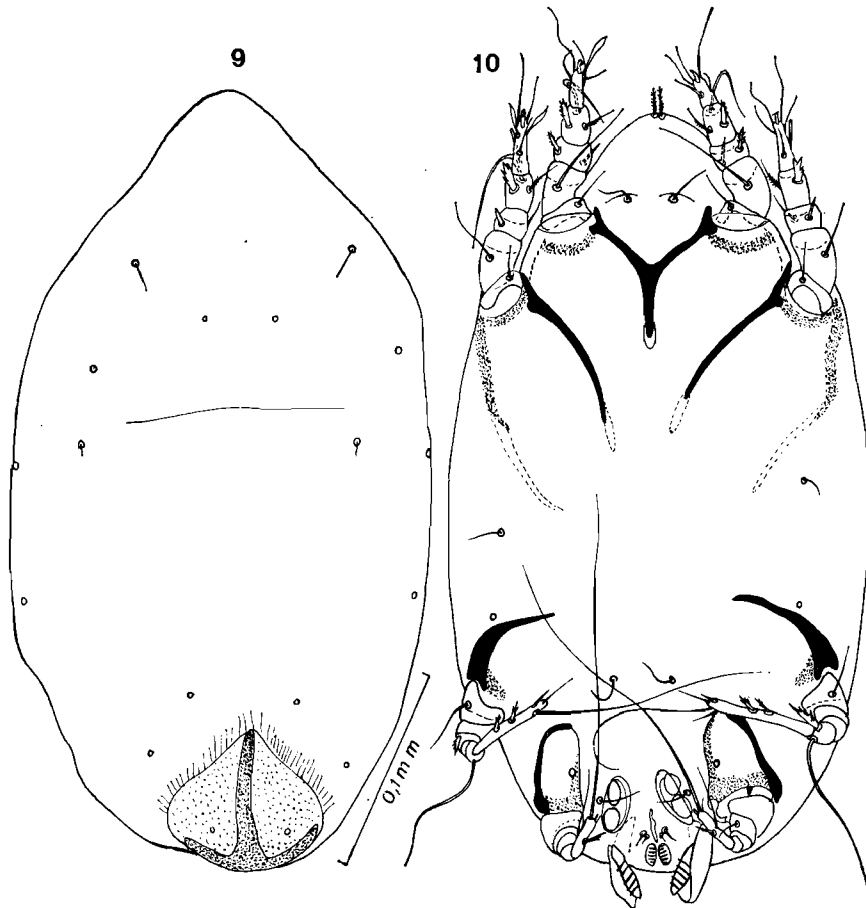


FIGS. 3-8 :

FIGS. 3-5. — *Neolabidophorus verrucosus* sp. n. Holotype hypopus, 3) terminal segments of legs I ; 4) III ; 5) and IV.

FIGS. 6-8. — *Dipodomysopus tuttlei* sp. n. Holotype hypopus, 6) terminal segments of legs I ; 7) III ; 8) IV.

*Hypopus* (fig. 6-10) : Holotype 360  $\mu$  long and 195  $\mu$  wide. In 2 paratypes these measurements are 390  $\mu \times$  210  $\mu$  and 362  $\mu \times$  185  $\mu$ . Anterior extremity conical. Epimera I fused in a rather long sternum. Other epimera free. Tarsi long, especially tarsi III which are 50  $\mu$  long. Tarsi III-IV ending into a long and fine seta. Palposoma very poorly developed; there is a pair of rather long palposomal setae, solenidia alpha lacking. The solenidia  $\omega$  1 on tarsi I-II are nearly as long as these tarsi, and they are bulbous apically.



FIGS. 9-10. — *Dipodomys tuttlei* sp. n. Holotype hypopus : 9) dorsum ; 10) venter.

*Host and locality*

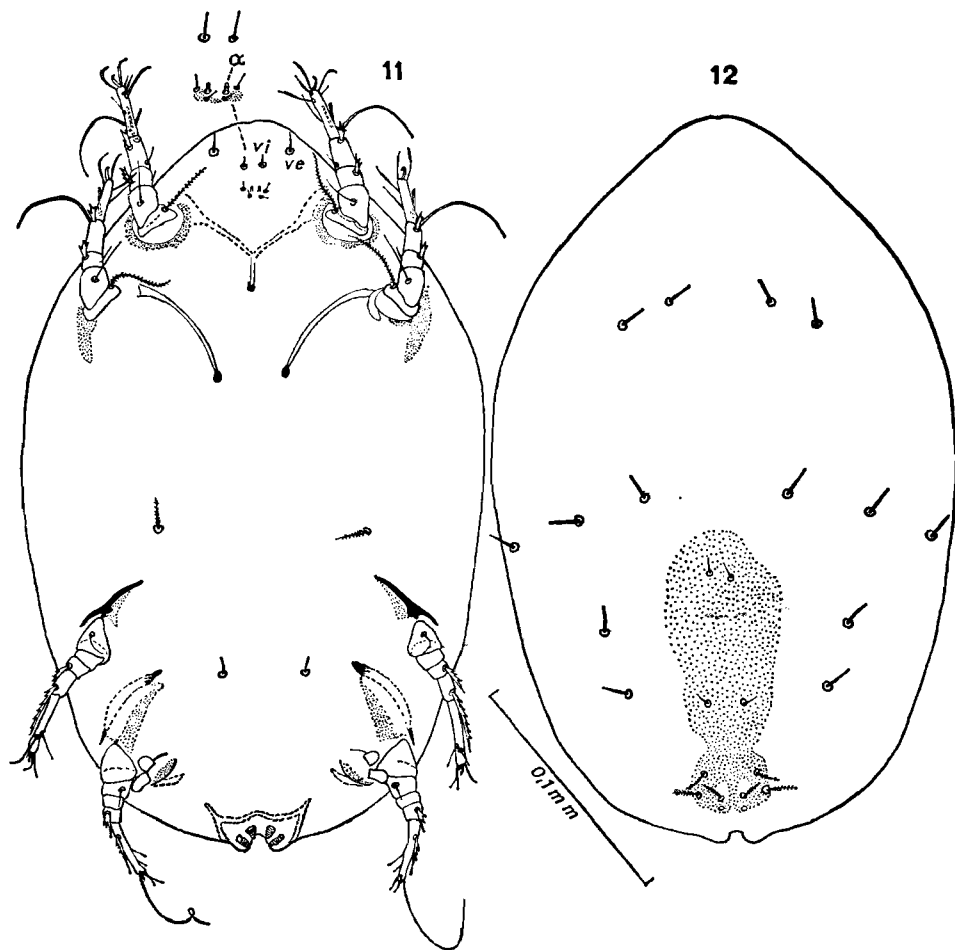
In hair follicles of *Dipodomys* sp., from Tucson, Arizona, U.S.A., 23.II.1924. Animal in Smithsonian Museum (n<sup>o</sup> 244291). (Holotype and 15 paratypes). Type in the U.S. National Museum, Washington.

Genus *Mediolabidophorus* gen. nov.

*Definition* : This genus is intermediate between *Metalabidophorus* Fain and *Neolabidophorus* Pence. The tarsi III and IV bear claws as in the first genus, but the genital suckers are short and rounded in shape as in the second genus. The clasping organ is small and sclerotized, it is

termino-dorsal or dorsal. Tarsi III and IV long, subequal. Tibia seta III thick, rather long and strongly barbed, tibial seta IV shorter with 4 edentations. There are 2 pairs of short palposomal hairs and 1 pair of short alpha solenidia.

*Type species* : *Mediolabidophorus neotropicalis* sp. n.



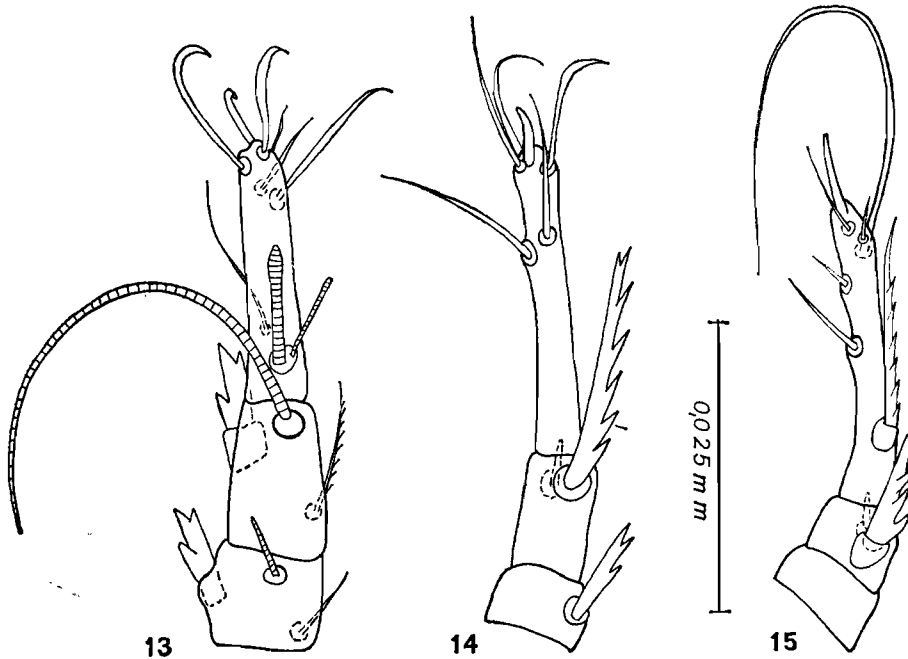
FIGS. 11-12. — *Mediolabidophorus neotropicalis* sp. n. Holotype hypopus : 11) venter ; 12) dorsum.

***Mediolabidophorus neotropicalis* spec. nov.**

*Hypopus* (figs. 11-15) : Holotype 290  $\mu$  long and 180  $\mu$  wide. Dorsal furrows absent. There is a small punctate area in the posterior region of the dorsum. The clasping organ is situated immediately behind this shield either in dorsal or in dorsoterminal position. Dorsal setae shortly barbed, 10-12  $\mu$  long. Epimera I-II poorly sclerotized. Genital suckers strongly lateral, in front of epimerites IV. Tarsi I-II with a small claw, tarsus III with a little smaller claw. Tarsus IV with a strong terminal straight spine (? modified claw). There are 2 pairs of short palposomal setae paramedian in position and apparently one pair of very short solenidia alpha. The *vi* and *ve* are ventral.

*Host and locality*

In hair follicles of *Heteromys desmarestianus*, Panama Canal Zone, 8.III.1961. Animal in Smithsonian Museum n° 319.910 (Holotype and 3 paratypes). Type in the U.S. National Museum, Washington.



FIGS. 13-15 : *Mediolabidophorus neotropicalis* sp. n. Holotype hypopus : 13) terminal segments of legs I ; 14) III ; 15) IV.

SUBFAMILY ALABIDOPINAE Fain, 1967

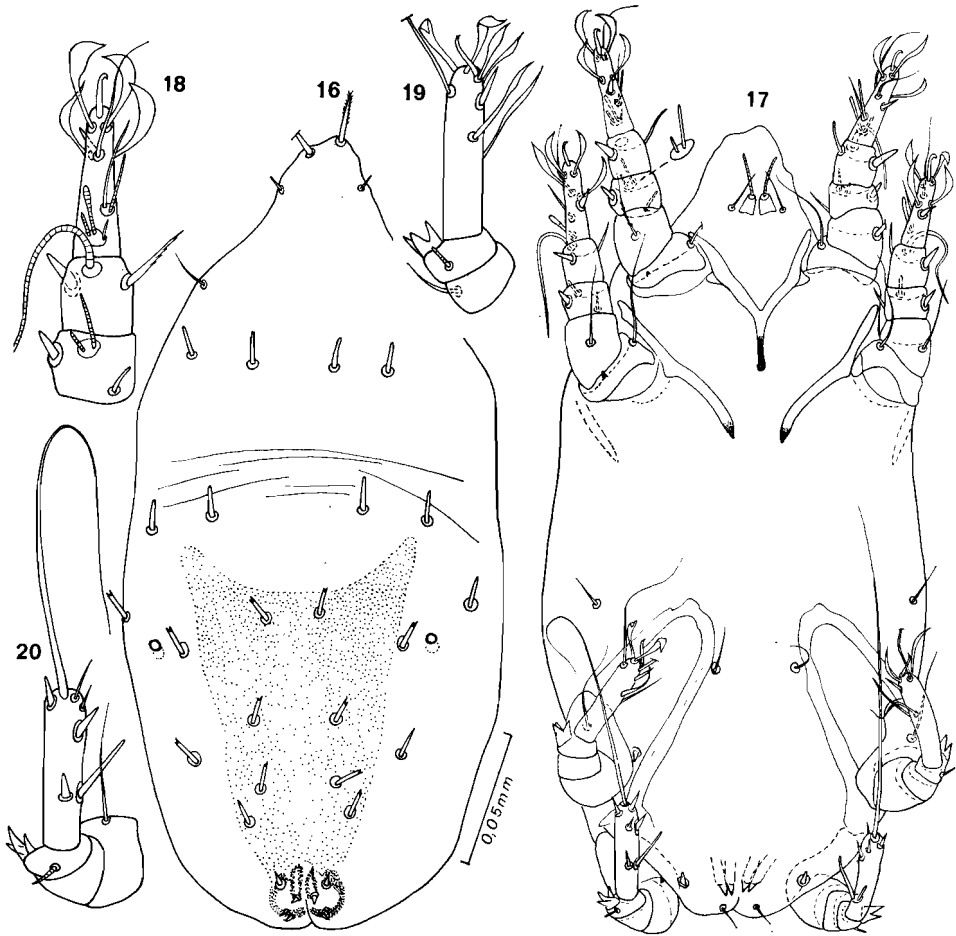
Genus *Alabidopus* Fain, 1967

We have found in the hair follicles of *Microcebus pusillus*, of Madagascar, several hypopi that are morphologically not separable from the genus *Alabidopus*. This genus was represented so far by only one species (*A. hydromys*) found on an Australian rat, *Hydromys chrysogaster reginae*.

The specimens from *Microcebus* differ from *A. hydromys* mainly by the fusion of the epimera III-IV, the presence of 2 solenidions on genu I and the leg chaetotaxy.

*Alabidopus microcebus* spec. nov.

*Hypopus* (fig. 16-20) : Holotype 265  $\mu$  long and 126  $\mu$  wide. In 2 paratypes : 245  $\times$  150  $\mu$  and 271  $\times$  135  $\mu$ . Dorsal surface as in *Alabidopus hydromys* except that the dorsal shield is shorter and the *l* 5 smaller. Ventral surface : palposoma as in *A. hydromys* but the external palposomal setae are setiform. Coxal fields III completely closed. Other characters as in *A. hydromys*. Legs as in that species but chaetotaxy slightly different. The tibial setae III and IV are trifid.



Figs. 16-20. — *Alabidopus microcebus* sp. n. Holotype hypopus : 16) dorsum ; 17) venter ; 18) terminal segments of legs I ; 19) III ; 20) IV.

#### *Host and locality*

In the hair follicles of *Microcebus pusillus*, Madagascar, 1870. Animal in the Museum d'Histoire naturelle, Paris (Holotype et 15 paratypes). Type in Museum of Paris.

FAMILY HYPODERIDAE Murray, 1877

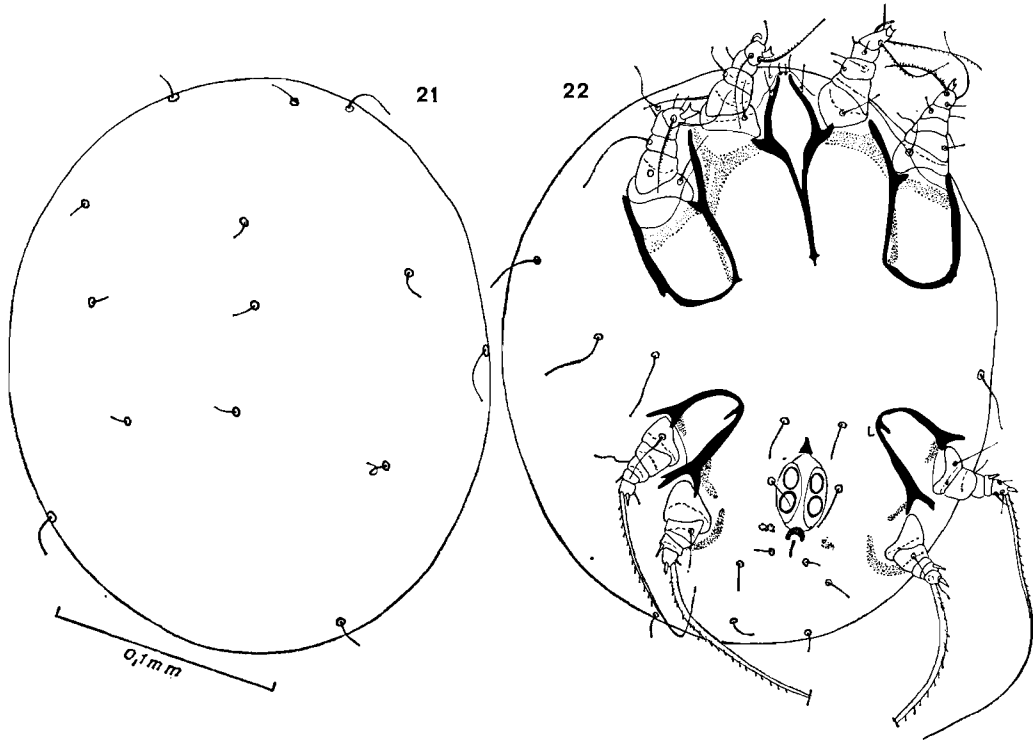
SUBFAMILY MURIDECTINAE Fain, 1968

Genus *Muridectes* Fain, 1968

This genus contained so far 2 species, only known from the hypopial stage, and found under the skin of African rodents.

We describe here 2 new species, one from *Spalax*, the other from a Gerbil.





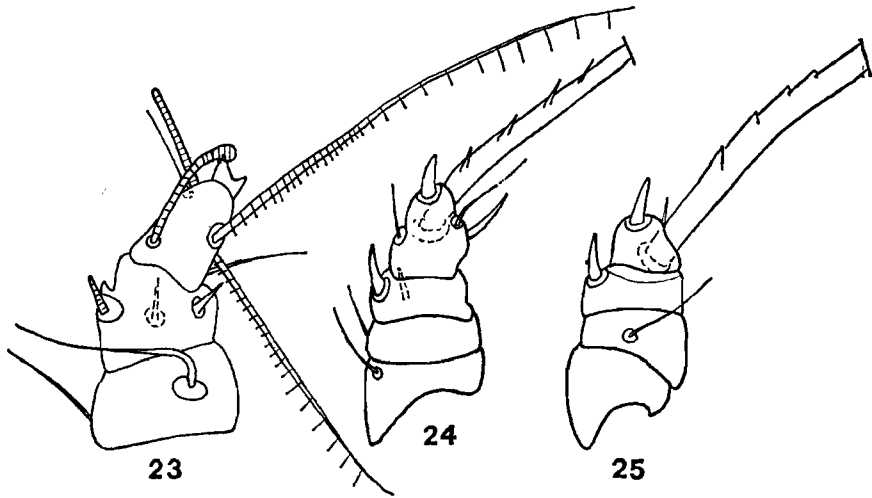
FIGS. 21-22. — *Muridectes spalacis* sp. n. Holotype hypopus : 21) dorsum ; 22) venter.

KEY TO THE GENUS *Muridectes*  
(Hypopi)

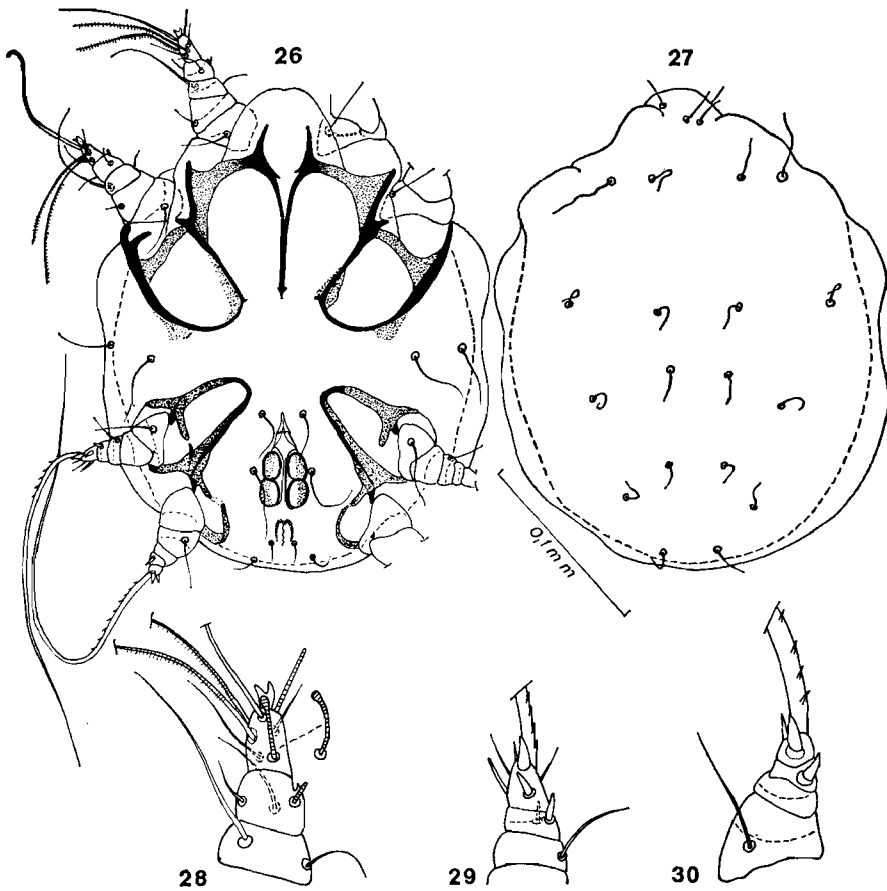
1. Claws I and II distinctly curved, not forked apically but regularly tapering apically. Coxal fields III either open or closed..... 2  
 Claws I and II straight or slightly curved, forked apically into two subequal conical points. Coxal fields III closed..... 3
2. Coxal fields III open. Claws I-II with a small medial or preapical tooth. Tarsi I-II with 2 not barbed setae. Tarsi III wider than long (ratio width : length = 1,5).....  
*M. heterocephali* Fain, 1968  
 Coxal fields III closed. Claws I-II without teeth. Tarsi I-II with 2 long setae bearing barbs at one side. Tarsi III longer than wide (ratio width : length = 0,6)..... *M. pedetes* Fain, 1969
3. Tarsi I and II with 3 long setae, of which 2 are barbed along one side. Tarsi I-IV 15  $\mu$ , 13  $\mu$ , 11  $\mu$  and 7  $\mu$  long respectively..... *M. gerbillus*. sp. n.  
 Tarsi I and II with only the 2 long barbed setae. Tarsi I-II 10,5  $\mu$ , 9,5  $\mu$ , 8,5  $\mu$  and 6  $\mu$  respectively.  
*M. Spalacis*. sp. n.

1. *Muridectes spalacis* spec. nov.

This new species is distinguished from *Muridectes heterocephali* by the presence on tarsi I-II of 2 long finely striated-barbed hairs, the fusions of the epimera III and IV and the shape of the claws of tarsi I-II which are forked. It is distinguished from *M. pedetes* by the forked aspect of claws I-II.



Figs. 23-25. — *Muridectes spalacis* sp. n. Holotype hypopus : 23) terminal segments of legs I ; 24) III ; 25) IV.



Figs. 26-30. — *Muridectes gerbillus* sp. n. Hypopus : 26) venter ; 27) dorsum ; 28) terminal segments of legs I ; 29) III ; 30) IV.

*Hypopus* (fig. 21-25) : Holotype 238  $\mu$  long and 210  $\mu$  wide (in slightly oblique view). Body ovoid, without sejugal or posterior furrow. Epimera I fused into a long sternum. Coxae II and III closed. A small epigynium is present. Legs short. Claws I-II thick, short and bifid ; claws III-IV short not bifid. Tarsi III longer than tarsi IV. Tarsi I with 2 long setae barbed at one side. There is a small crescentic sclerite in front of anus. Dorsal setae rather short.

*Host and locality*

Under the skin of *Spalax* sp., 1897.

This animal is in the Museum d'Histoire naturelle, Paris (Holotype) (Coll. Latourneaux ; n° 1879-1618). Holotype in this Museum.

2. *Murideetes gerbillus* spec. nov.

This species is close to *M. spalacis*. It differs from the latter mainly by the presence of 3 long setae on tarsi I-II.

*Hypopus* (fig. 26-30) : Holotype 242  $\mu$  long, and 190  $\mu$  wide. Coxae II and III as in *M. spalacis*. There is a long sternum. Claws I-II forked. Tarsi longer than in that species, the tarsi I-II bear 3 long setae, of which 2 are barbed on one side. The preanal sclerite is in the shape of an inverted U. Dorsal setae longer than in *M. spalacis*. Solenidion  $\omega$  1 long, globulous at its tip.

*Host and locality*

Under the skin of *Gerbillus nanus*, from Djaneif, Algeria, V-1975 (Coll. Rhodin). Animal in the Museum d'Histoire naturelle, Paris. Type in this Museum.

SUMMARY

The authors describes 2 new genera and 6 new species of heteromorphic deutonymphs (= hypopi) discovered either under the skin or in the hair follicles of mammals.

RÉSUMÉ

*Nouveaux hypopes endofolliculaires ou sous-cutanés en provenance de Mammifères.*

Les auteurs décrivent 2 nouveaux genres et 6 nouvelles espèces de deutonymphes hétéromorphes (= hypopes) récoltés sous la peau ou dans les follicules pileux de divers mammifères.

RÉFÉRENCES

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- PENCE (D. B.) & GENOWAYS (H. H.), 1974. — *Neolabidophorus yucatanensis* gen. et sp. n. and a new record for *Dermacarus ornatus* Fain, 1967 (Acarina : Glycyphagidae) from *Heteromys gaumeri* Allen and Chapman, 1897, Gaumer's spiny pocket mouse (Rodentia : Heteromyidae). — J. of Parasit., **60** (4) : 712-715.

*Paru en Juin 1978*