

Two New Species of Hypopi (Acari, Glycyphagidae) from Thai Mammals

With 12 Text-figures

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ABSTRACT *Alabidopus bipilifer* sp. nov. and *Tupaïopus thailandicus* gen. nov., sp. nov., both of which are represented only by the hypopus stage, are described.

In a collection of hypopi taken from mammals by Dr. Hiroshi Suzuki, Nagasaki University, in Thailand, we found two new species belonging to the family Glycyphagidae. One is a new species of the genus *Alabidopus* Fain, *A. bipilifer* sp. nov. (Alabidopinae), from *Rattus sabanus*, and the other is a new species of a new genus, *Tupaïopus thailandicus* gen. nov., sp. nov. (Labidophorinae), from *Tupaia glis* and *Anourosorex squamipes*.

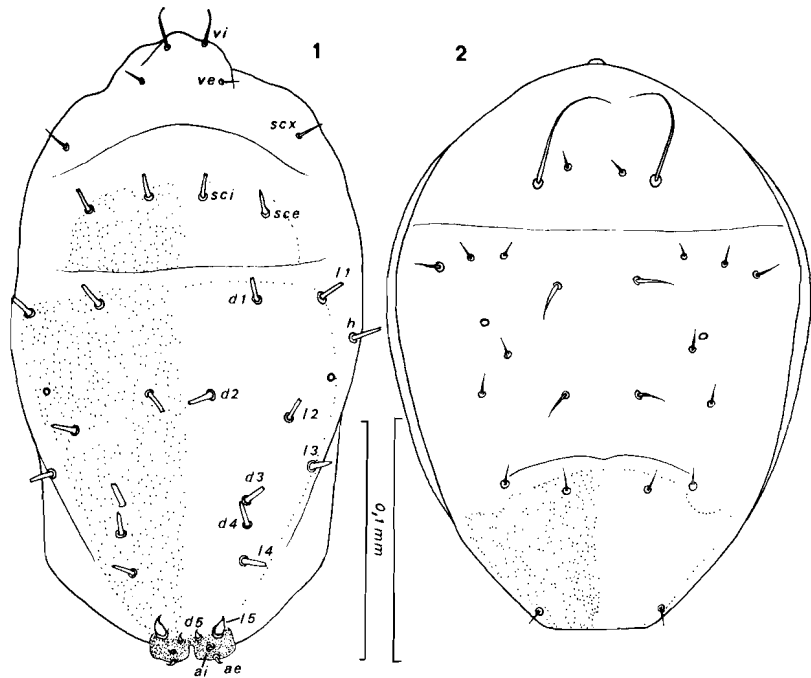
The holotypes are deposited in the Institut royal des Sciences naturelles de Belgique, and the paratypes in the collections of A. F. and K. U.

Genus *Alabidopus* Fain, 1967

Alabidopus bipilifer sp. nov.

This species is clearly distinct from the other three species described in the genus, *A. hydromys* Fain, 1967, *A. microcebus* Fain et Lukoschus, 1978, and *A. muris* Lukoschus et al. 1979, in having 2 long setae, instead of one in the other species, and unequal, simple setae at the apex of tarsi IV, specific structure of the sclerotized pygidial plate and in the shape of the palposomal area.

Hypopus (Figs. 1, 3–6). Holotype 268 μm long and 150 μm wide; in the para-



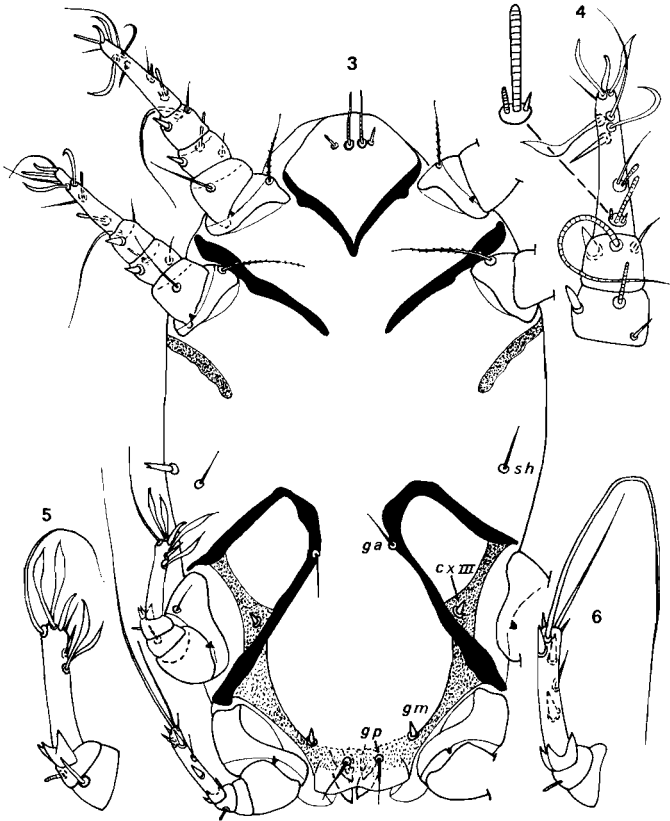
Figs. 1-2. — 1. *Alabidopus bipilifer* sp. n. Hypopus, dorsum.. — 2. *Tupaiopus thailandicus* sp. n. Hypopus, dorsum.

type $270\ \mu\text{m} \times 160\ \mu\text{m}$. Dorsum:— Sejugal furrow poorly developed but the cuticle in our specimens is not in very good condition. Setae *vi* slightly thickened basally, $18\ \mu\text{m}$ long; *ve* very short. Setae *sci*, *sce* and most of hysteronotal setae are short ($9\ \mu\text{m}$ long) and bifid spines. Setae *d5*, *l5*, *ai* and *ae* are short spines recurved anteriorly; all situated on a sclerotized plate. Venter:— Solenidia of palposoma situated on a short stalk and flanked by 2 thick setae much shorter than solenidia. Epimera I fused into Y; epimera II free; epimera III and IV fused to form a closed coxal field III. Genital orifice ventro-terminal. Legs:— Tarsi (I-IV) $33\ \mu\text{m}$, $33\ \mu\text{m}$, $30\ \mu\text{m}$ and $31\ \mu\text{m}$ long, respectively. Claws (I-III): $8.2\ \mu\text{m}$; $8.4\ \mu\text{m}$; $8.2\ \mu\text{m}$ long. Chaetotaxy of legs (I-IV): Tarsi 8-7-7-8; tibiae 2-2-1-1; genua 2-2-1-0; femora 1-1-0-0; trochanters 1-1-0-0. Solenidiotaxy:— Tarsi 3-1-0-0; tibiae 1-1-1-1; genua 1-1-0-0.

Host and locality. Attached on the hairs of *Rattus sabanus* (σ), Nakorn Nayok, Thailand, 23-VII-1978 (Coll. Dr. Suzuki) (Holotype and one paratype, hypopi).

Tupaiopus gen. nov.

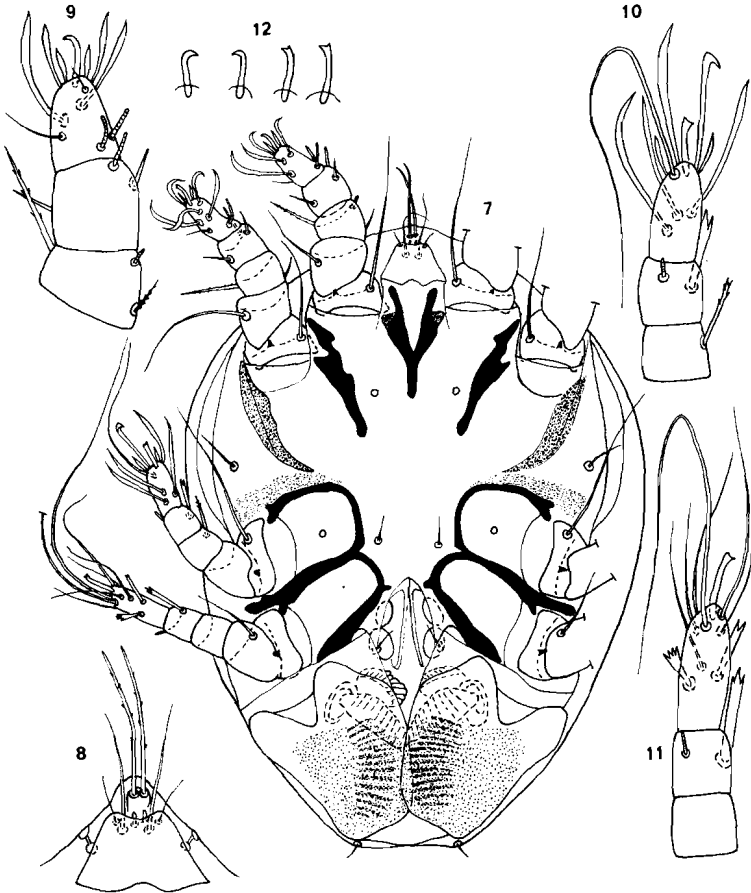
Definition. This genus is known only from hypopi. Body thick and short. Dorsum:— With two transverse furrows, anterior (sejugal) one complete and



Figs. 3-6. *Alabidopus bipilifer* sp. n. Hypopus. — 3. Ventral view. — 4. Leg I. — 5. Leg III. — 6. Leg IV.

posterior (or opisthonotal) one incomplete. Cuticle soft except on opisthonotum with punctate part. Dorsal setae short except for *sc e* which is much thicker and longer than the other dorsal setae. Venter:— Epimera I fused into Y, epimera II free. Coxae III and IV forming closed fields separated by midline. Two pairs of submedian genital suckers normal in shape. Clasping organ normally developed as in *Labidophorus*. Palposoma poorly developed with a pair of short solenidia and two pairs of unequal smooth setae. Setae *vi* thick and bearing a few very short barbs. Legs strong and ending in a claw. Claws III-IV each with a small dorsal subapical tooth; claw IV slightly longer than claw III, which is slightly longer than anterior claws. Chaetotaxy:— Present the setae *vi*, *sc i*, *sc e*, *d 1* to *d 5*, *l 1* to *l 5*, *h*, *sh*, *ga*, *gm*. Setae *ve* absent. On legs (I-IV): Tarsi 8-8-8-8; tibiae 2-2-1-1; genua 2-2-1-0; femora 1-1-0-1; trochanters 1-1-1-0. Solenidiotaxy: Tarsi 2-1-0-0; tibiae 1-1-1-1; genua 1-1-0-0.

Type-species: Tupaiopus thailandicus sp. nov.



Figs. 7-12. *Tupaiopus thailandicus* sp. n. Hypopus. — 7. Ventral view. — 8. Region of palposoma. — 9. Leg I. — 10. Leg III. — 11. Leg IV. — 12. Claws I, II, III and IV (from left to right).

Tupaiopus thailandicus sp. nov.

Hypopus (Figs. 2, 7-12). Holotype 231 μm long and 174 μm wide. In 2 paratypes 240 $\mu\text{m} \times 180 \mu\text{m}$; 243 $\mu\text{m} \times 178 \mu\text{m}$. Dorsum:— Setae *sc e* 55 μm long; other dorsal setae are much shorter (6 to 15 μ). Venter:— Claspings organ well developed; internal club-shaped setae with 10-11 transverse ridges; external club-shaped setae with 10 ridges. Lengths of tarsi (I-IV) 19 μm , 19 μm , 19 μm and 26 μm , respectively. Lengths of claws (I-IV) 7.2 μm , 7.2 μm , 8.2 μm and 9.2 μm long, respectively (=length of external part of claws, excluding their base fixed in the tarsi).

Host and Locality. 1) *Tupaia glis* (σ), Nakorn Nayok, Thailand, 23-VII-1978

(holotype and 4 paratypes, all hypopi). 2) *Anourosorex squamipes* (♀), Doi Inthanon, Thailand, 23-II-1979 (1 paratype).

The mites were collected by Dr. Suzuki.

Remarks. The genus *Tupaiopus* belongs to a group of 15 genera of hypopi characterized by the presence of a well-developed and functional pilicolous clasping organ.

It is distinguished from all these genera by the size of the claws III and IV, both of which are slightly longer than claws I and II. Other characteristics, which are shared by only two species of *Dermacarus* (see Fain, 1969), are the fusion of posterior epimera and epimerites forming closed coxal fields III and IV. By the absence of *ve* setae, this new genus appears close to *Dermacarus*, though there is only one pair of palposomal setae and the claws IV are either very short or absent in the latter genus.

ACKNOWLEDGEMENTS

Gratitude is expressed to Dr. Hiroshi Suzuki, Nagasaki University, for providing the authors with the specimens described above and to Japanese and Thai mammalogists who helped Dr. Suzuki in his survey of Thai mammals and their parasites.

REFERENCES

- Fain, A., 1967. Diagnoses d'Acariens nouveaux, parasites de Rongeurs ou de Singes (Sarcoptiformes). *Rev. Zool. Bot. Afr.*, **76**: 280-284.
- 1969. Les Deutonymphes hypopiales vivant en association phorétique sur les Mammifères (Acarina: Sarcoptiformes). *Bull. Inst. roy. Sci. nat. Belg.*, **45** (33): 1-262.
- & F. S. Lukoschus, 1978. New endofollicular or subcutaneous hypopi from mammals (Acarina: Astigmata). *Acarologia*, **19**: 484-493.
- Lukoschus, F. S., Janssen Duijghuijsen, G. H. S. & A. Fain, 1979. Parasites of Western Australia. III. *Alabidopus muris* sp. nov. (Acarina: Astigmata: Glycyphagidae) from *Rattus tunneyi*. *Rec. West Aust. Mus.*, **7**: 29-36.