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NOTES ON TWO ASTIGMATIC MITES (ACARI) LIVING IN BEEHIVES IN THAILAND

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APIS CERANA
HIVES
MITES

SUMMARY : Two species of Astigmatic mites were found in debris collected from hives of the Asian honey bee, *Apis cerana* Fabricius, in Thailand. One, *Austroglycyphagus thailandicus* (Glycyphagidae) is newly described herein. The other, *Forcellinia faini* Delfinado-Baker and Baker, 1989 (Acaridae), was initially described from beehives in Puerto-Rico, and the present record enlarges its known distribution.

APIS CERANA
RUCHES
ACARIENS

RÉSUMÉ : Deux espèces d'acariens astigmatés furent rencontrées dans des ruches de l'abeille asiatique, *Apis cerana* Fabricius, en Thaïlande. L'une, *Austroglycyphagus thailandicus* (Glycyphagidae) est une espèce nouvelle décrite ci-dessous. La seconde, *Forcellinia faini* Delfinado-Baker et Baker, 1989 (Acaridae), avait été décrite à l'origine d'après des spécimens trouvés dans des ruches à Porto-Rico, et sa présence en Thaïlande élargit considérablement son aire de distribution.

We record herein two species of mites found in hives of the Asian honey bee, *Apis cerana* (Fabricius), in Thailand. One is *Forcellinia faini* Delfinado-Baker and Baker, 1989 (Acaridae), the other is a new species, *Austroglycyphagus thailandicus* sp. n. (Glycyphagidae) and is described herein.

All the measurements are in micrometers.

Family Acaridae

Genus *Forcellinia* Oudemans, 1924

Forcellinia faini Delfinado-Baker and Baker, 1989

In 1987, DELFINADO-BAKER and BAKER recorded the presence in beehives, in Puerto-Rico, of *Forcellinia gallieriella* Womersley, 1963, a mite parasitizing beehives in Australia and England. After the

revision of the genus *Forcellinia* by FAIN (1987) it appeared to these authors that the mite that they found in Puerto-Rico belonged actually to a new species, *F. faini* Delfinado-Baker and Baker, 1989.

One of us (U. G.) received numerous specimens of this mite, collected by W. RATH during late 1988 in debris from hives of *A. cerana*, located at Chiang Mai (Northern Thailand). The mites, although very common in the debris, were never found to be associated with the bees. Other specimens were collected by U. G. from the same habitat at Ko Samui (Southern Thailand) during January 1989. The occurrence of this species in different parts of Thailand as well as in same habitat in Puerto-Rico suggests that it may be widely distributed in tropical beehives. Specimens collected at Chiang Mai on 31 November 1988 were inseparable from the type material of *Forcellinia faini* which we have examined.

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Family Glycyphagidae

Genus *Austroglycyphagus* Fain and Lowry, 1974

Austroglycyphagus thailandicus spec. nov.

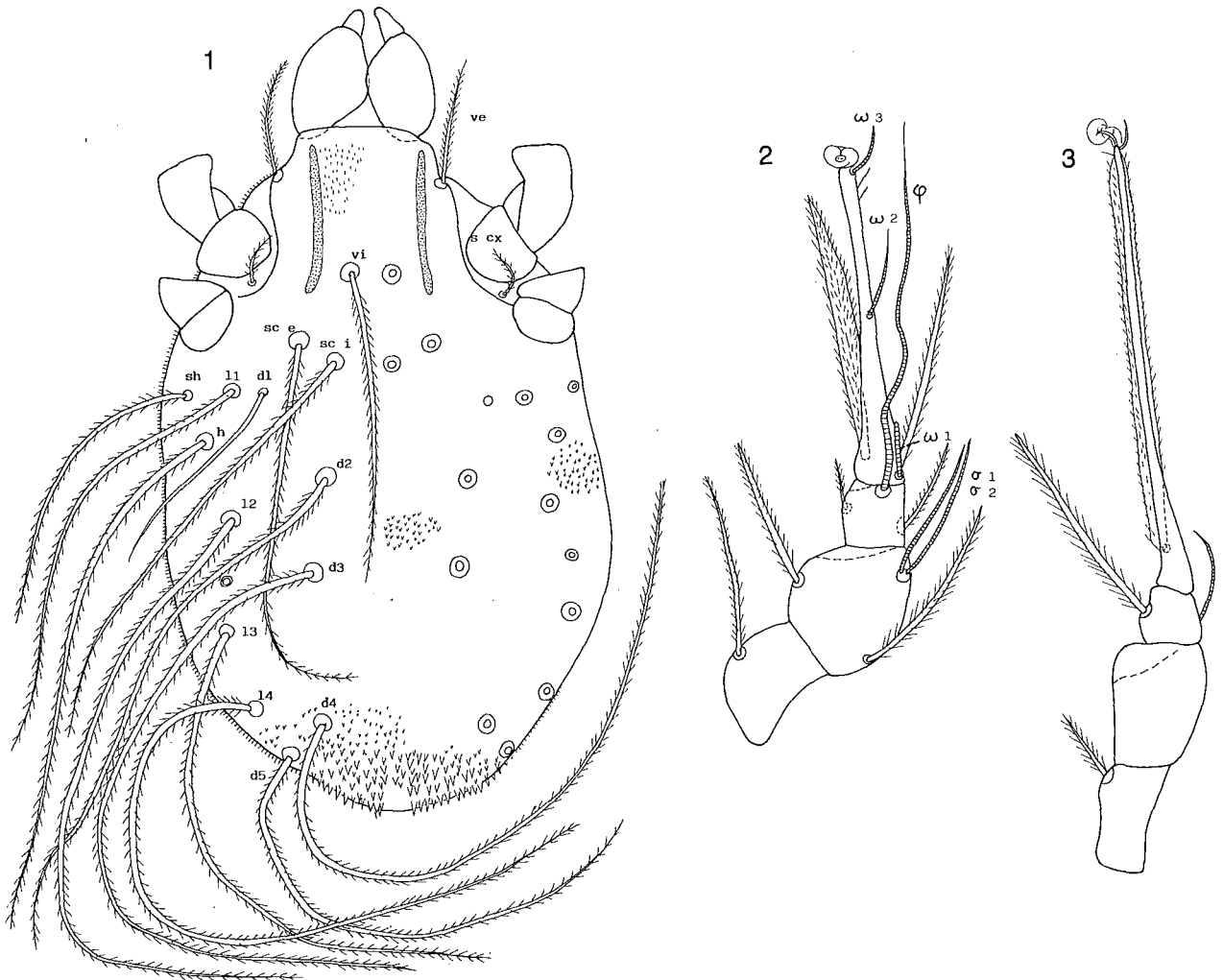
The description is based on the holotype and the paratypes.

FEMALE holotype (figs 1-4) : Idiosoma 348 long and 230 wide. In 3 paratypes the length and width are 350 × 240 ; 330 × 240 ; 325 × 210.

Dorsum : Cuticle covered by very thin and short needle-like cuticular projections except in two punc-

tate paramedian longitudinal bands situated on the propodonotum. These projections are distinctly larger in the posterior part of the body behind the bases of setae *d4* and *d5*. All the dorsal setae are barbed except *d1* which is bare. Setae *ve* and *vi* are 78 and 180 long respectively. Setae *sc i* and *sc e* are situated on a concave line, they are 250 long. The *sx* are short (33 long) and bear short barbs. Lengths of hysteronotal setae : *d1* 135 (they are lacking in the holotype) ; *d2* 320 ; *d3* 410 ; *d4* 400 ; *d5* 300 ; *l1* 250 ; *l2* 410 ; *l3* 320 ; *l4* 400 ; *h* 300 ; *sh* 200. The *l5* are ventral, they are 400 long.

Venter : The propodosoma and a large area situated between the vulva and the posterior legs is



FIGS. 1-3 : *Austroglycyphagus thailandicus* sp. n., female
1. — Dorsal view. 2. — Leg I in dorso-lateral view. 3. — Leg IV in lateral view.



FIGS. 4-5 : *Austroglycyphagus thailandicus* sp. n., female (4) and male (5) in ventral view.

finely striated and devoid of cuticular projections. Behind the vulva the cuticle is covered with small projections. These projections are distinctly larger in the area situated behind the anus. Epimera I very poorly sclerotized in their median part. Lengths of setae : *a1* 45 ; *a2* 42 ; *a3* 42 ; *a4* 105 ; *a5* 160 ; *ga* 25 ; *gm* 55 ; *gp* 63 Chelicerae 93 long. Copulatory papilla ventro-terminal, the cuticle in front and behind the papilla is bare.

Legs : Legs I and II inserted dorsally. Tarsi I-IV very thin and 129-135-160 and 183 long respectively. All the tarsi bear a long barbed ventral scale inserted close to its base. Tarsi I-II with a strong barbed basal seta 100 long. Tibiae I and II with 2 unequal barbed setae, the *hT* is 18-20 long, the *gT* 39 to 43 long. Solenidia : Tarsus I with ω 3 slightly curved and apical ; the ω 2 is situated slightly closer to the apex than to the base of the segment, it is 45 long ; the ω 1 is basal and 27 long. Tibiae I and II with a long twisted solenidion 150 long. Genu I with 2 equal or subequal solenidia 63 long.

MALE : (figs 5) : Length and width of the idiosoma in 3 paratypes : 360 × 215 ; 330 × 210 ; 300 × 205. *Dorsum* as in the female but the cuticle bears only very small needle-like projections. *Venter* : Genital plate punctate 32 long and 48 wide and bearing the setae *a1* 34 long. Setae *a2* and *a3* thick and barbed and situated close to the posterior margin of the body. Penis thick, curved ventrally and 35 long (measured in straight line). Chelicerae 84 long. Legs as in the female.

HABITAT : All our specimens (holotype and 5 female paratypes, 8 male paratypes) were found in a hive of *Apis cerana*, in Koh Samui, Thailand (29.I.1989).

Holotype in the Institut royal des Sciences naturelles de Belgique. Paratypes in the collection of the authors.

With the new species described herein, the genus *Austroglycyphagus* includes now 12 species. In three of these species (*A. geniculatus* (Vitzthum, 1919), *A. rwandae* Fain, 1976 and *A. thailandicus* sp. n.) the tibiae I and II bear 2 barbed setae, whilst in all the other species these tibiae bear only one seta. These three species can be separated from each other in the following key (based on females) :

1. Setae of tibiae I-II equal in length. Setae *sc i* and *sc e* situated on a straight line. Female with only 2 unequal pairs of setae in front of the anus. Setae *a2* and *a3* strongly unequal ... *A. geniculatus* (Vitzthum, 1919)
- Setae of tibiae I-II distinctly unequal. Setae *sc i* and *sc e* situated on a concave line. Setae *a2* and *a3* subequal..... 2
2. Idiosoma 470 long and 320 wide. Cuticular projections on the posterior part of the body not larger than those on the other parts of the body. Copulatory papilla projecting behind the body. Tarsi I-IV longer (140-150-188-225 long respectively). In the male the penis is shorter than the length of the genital plate ; idiosoma larger (402 long) *A. rwandae* Fain, 1976.
- Idiosoma 340 long and 230 wide (holotype). Cuticular projections on the posterior part of the body distinctly larger than those in the other parts of the body. Copulatory papilla not projecting behind the body. Tarsi I-IV shorter (129-135-160-183 long). In the male : penis longer than the length of the genital plate ; idiosoma smaller (330 long) *A. thailandicus* n. sp.

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