

SPINITARSELLUS ORIENTALIS n.g., n. sp.

(Acari : Spinitarsellidae n. fam.)

PARASITIC ON **TUPAIA FERRUGINEA**,
FROM BORNEO*

SPINITARSELLUS ORIENTALIS n.g., n. sp.
(Acari : Spinitarsellidae n. fam.)

PARASITIC ON **TUPAIA FERRUGINEA**,
FROM BORNEO*

by A. FAIN** anod F.S. LUKOSCHUS***

Summary : A new genus and species, *Spinitarsellus orientalis* n.g., n.sp., representing a new family is described from *Tupaia ferruginea*, in Borneo.

FAMILY SPINITARSELLIDAE n. fam.

Definition : Only known from the female. Body well sclerotized. Absence of retrorse processes on idiosoma, legs or gnathosoma. *Dorsum* covered by two very large sclerotized median shields, a propodosomal and an hysterosomal. The rest of the cuticle is finely striated. *Venter* : Cuticle finely striated except along epimera I-IV where narrow punctate shields are present. Epimera I fused in a H ; epimera II-III-IV loosely fused together. Vulva in an inverted Y, situated at the level of coxae II, copulatory papilla small, median, situated immediately behind the anus. Epigynium well developed, in an inverted U. Anus ventral, close to posterior extremity. Orifices of fat-glands situated between *l 1* and *l 2*. *Legs* long and strong ; legs IV longer and stronger than legs III. All tarsi end in a pedunculate, rather small sucker ; absence of apical processes at apex of the tarsi. Gnathosoma rather small ; palps surrounded ventrally by rather large transparent membranes.

Chaetotaxy of body : A pair of small *vi* setae are present ; *sci* and *sc e* strong and spinous ; *d 1*, *d 2*, *d 3* are microsetae, *d 4* and

* Déposé le 4 mars 1981.

** Instituut de Médecine Tropicale, 155, Nationalestraat, B-2000 Antwerpen.

*** Katholieke Universiteit Nijmegen, Toernooiveld, NL-Nijmegen.

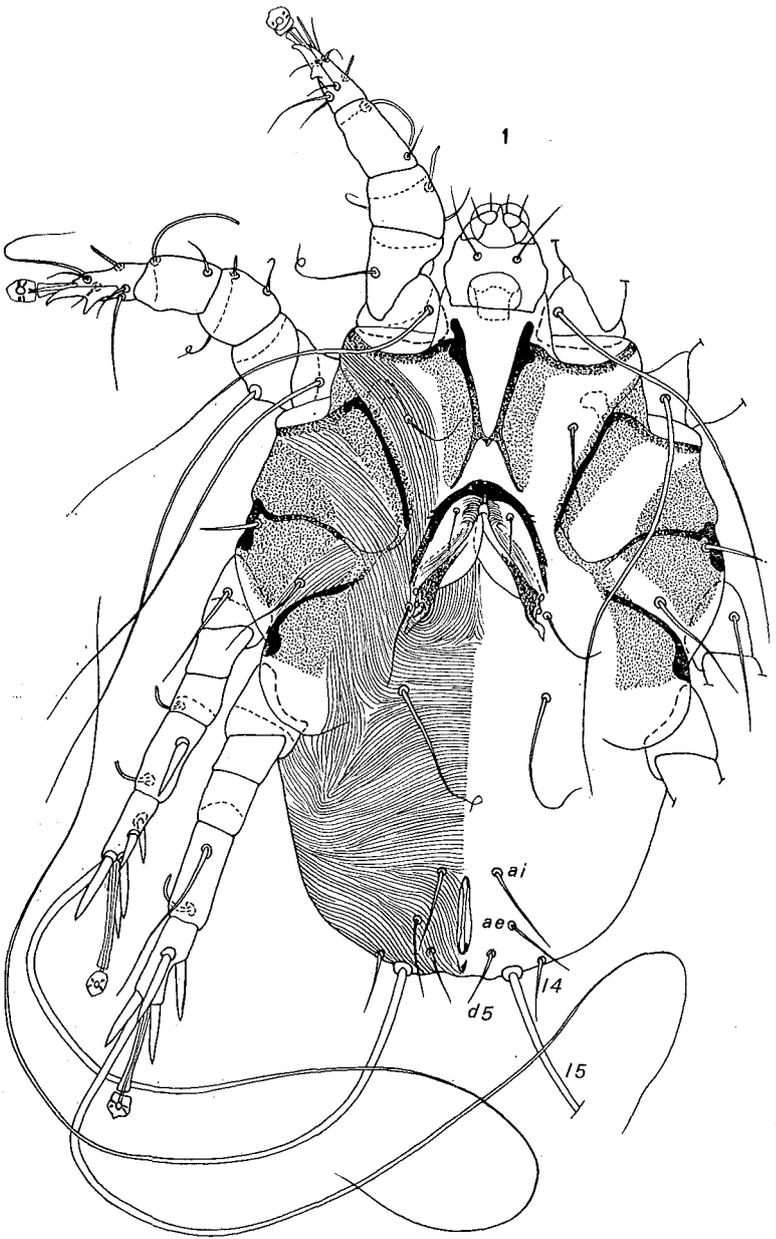


FIG. 1. — *Spinitarsellus orientalis* n. sp. Female, ventral view.

d 5 are spinous ; *l 1*, *h*, *sb*, *l 2*, *l 3*, *l 4* are relatively thick ; *l 5* thick and very long. Setae *a i* and *a e* strong. There are 3 pairs of genitals : *g a*, *g m*, *g p*. Setae *cx I* and *cx III* well developed.

Chaetotaxy of legs : Tarsi I-II with a large ventro-apical spine bearing two strong prongs, an apical curved ventrally and a medio-ventral straight and directed ventrally. In addition, these tarsi bear 6 simple setae. In tarsus II one of these simple setae is long. Tarsus III with 5 big spines and a very long and strong apical seta. Tarsus IV with 4 big spines and one long apical seta. Tibiae with 1-1-1-1 setae. Genua 2-2-0-0. Femora 1-1-0-0. Trochanters 1-1-1-0. *Solenidiotaxy* : Tarsi 2-1-0-0. Tibiae 1-1-1-1. Genua 1-1-1-0.

Type genus : *Spinitarsellus* n.g.

Remarks on the family Spinitarsellidae (Astigmata).

The genus *Spinitarsellus* presents some characters of the family Psoroptidae, e.g. the same general aspect and the same structure of vulva, anus, copulatory tube and gnathosoma. However it cannot be retained in this family for the following reasons :

1. Complete absence of apical curved processes on tarsi I-IV, these organs are replaced by one large bipronged apico-ventral spine on tarsi I-II and by several large spines on tarsi III (5 spines) and IV (4 spines) ;
2. Great development of legs IV which are longer and stronger than legs III ;
3. Dorsum with large sclerotized shields.

It is to be noted that in genus *Acaroptes* Womersley, the male possesses a two-pronged spine on tarsi I and II and several large spines on tarsus III. This genus (for which the new family Acaroptidae had been erected by Womersley, 1953) however is a true Psoroptidae by the characters of the female (apical curved process present on tarsi I-II, strong reduction of posterior legs and of epigynium, absence of hysteronotal shield) (see Fain, 1965). The genus *Spinitarsellus* could represent the ancestral form of *Acaroptes*.

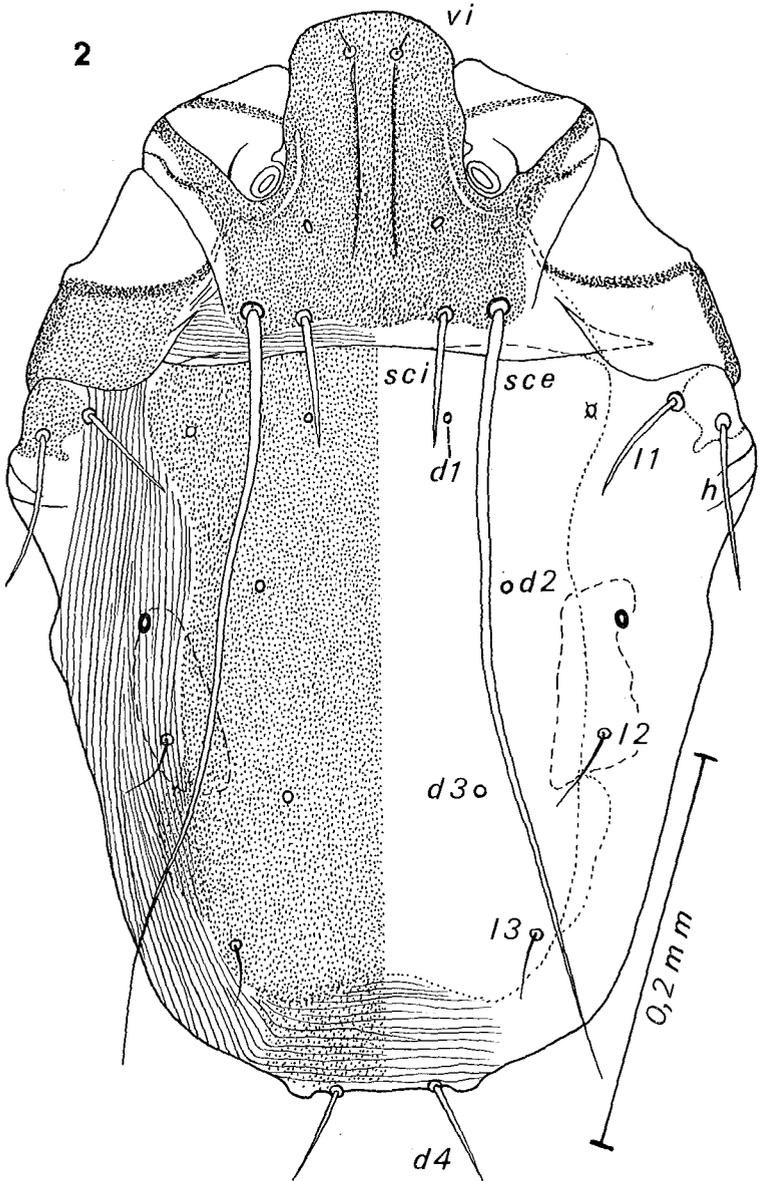


FIG. 2. — *Spinitarsellus orientalis* n. sp. Female, dorsal view.

Genus *Spinitarsellus* n. gen.

Definition : With the characters given for the family.

Type species : *Spinitarsellus orientalis* n. spec.

Spinitarsellus orientalis n. spec.

Female (Holotype) (fig. 1-2) : Idiosoma 540 μ long, 370 μ wide. *Dorsum* : Propodosomal shield 147 μ wide (along its posterior border), bearing the 4 scapular setae. Setae *sci* 63 μ , *sc e* 350 μ . Hysteronotal shield very large, arriving near the posterior border of body, it is longer (300 μ) than wide (225 μ). *Venter* : epimera bordered with rather narrow punctate plates. Opisthogaster completely striated. *Legs* : The two-pronged spine of tarsus I is smaller than that of tarsus II and bears a smaller medio-ventral prong than the latter. Legs III-IV ending in a small sucker situated on a long peduncle. The mite is devoid of sclerotized retrorse processes on the body or on the legs, however it possesses some very long hairs which probably serve for catching the host, e.g. the very long *l5* setae (750 μ or more) and the long setae on tarsi III-IV (450-500 μ).

Host and locality :

Holotype and only known specimen, from *Tupaia ferruginea*, Mount Kenopai Borneo, 14.V.1894 (Coll. F.L.) Animal in Leiden Museum n° 1283 (Coll. Buttikofer). It is not certain that this animal is the true host of this mite.

Holotype in Museum of Natural History, Leiden.

Bibliography

FAIN A., 1965. — Les Acariens producteurs de gale chez les Edentés et les Marsupiaux (Psoroptidae et Lobalgiidae Sarcoptiformes). *I.R.S.N.B.*, XLI (17) : 1 - 41.
