

NASALIALGES BORNEENSIS gen. n. sp. n.
(ACARI, ASTIGMATA, PSOROPTIDAE)
PARASITIC ON A MALAYSIAN
COLOBINE MONKEY*

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The mite that we describe here was discovered on the skin of a Malaysian monkey, *Nasalis larvatus*. It belongs to a new genus and species in the family Psoroptidae. This family contained until now 8 subfamilies and among these four are completely specialized for primates, i.e. Cheirogalalinae, Makialginae, Paracoroptinae and Cebalinae (Fain, 1963).

The Cheirogalalinae (1 genus and 1 species) and Makialginae (4 genera and 7 species) are all parasitic on lemurs of Madagascar. In these subfamilies the setae *vi* are present and the posterior legs are well developed. All these genera except one (*Lemuralges*) are characterized by the presence on the idiosoma, gnathosoma and legs of well-developed retrorse processes for attaching to the skin of the host. These species are the most primitive representatives of the family.

The Paracoroptinae (2 genera and 6 species) live on African Catarrhinian primates (Cercopithecidae, Pongidae). In these species the retrorse processes are either poorly developed or completely absent, the posterior legs are more reduced, especially in the nymphs, the anterior tarsi bear an apico ventral spine and not a sclerotized process and the idiosoma is very short and broad. The *vi* setae are present. These mites are more evolved than the preceding ones.

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The Cebalginæ (6 genera and 7 species) are parasitic on the skin of South American Platyrrhinian monkeys. They are characterized in the males by the very curious modification of the legs III and the absence of adanal suckers, and in the females by the presence of a sclerotized band around the opisthosoma. The posterior legs are generally strongly reduced in both sexes and the *v i* setae are present.

In the new genus *Nasialialges*, the body, the legs and the gnathosoma are devoid of retrorse processes; the male has normal legs III and the female has short and thin posterior legs. This genus resembles therefore the Paraceroptinæ, however it is devoid of *v i* setae and in the female the opisthosoma is more or less rectangular and its posterior margin presents a thick sclerotized band as in the Cebalginæ. This genus combines therefore the characters of both Cebalginæ and Paraceroptinæ but it is more close to the latter. However it is distinguished from this subfamily by several important characters and we propose to put it in a new subfamily Nasialialginæ.

Nasialialginæ Subfam. n.

Definition: With the characters of the Paraceroptinæ, except for the following characters: in the female the opisthosoma is more or less rectangular and its posterior margin is highly sclerotized and divided in four lobes bearing the *d 5* and *l 5* setae and the vulva is transverse; in the male the tarsi IV are well formed (not vestigial) and the posterior lobes of the body are widely separated and very long. In both sexes the *v i* setae are absent.

Type genus: *Nasialialges* gen. n.

Nasialialges gen. n.

Definition: With the characters of the subfamily. Hysteronotum striated and without a shield in the female. In both sexes the tarsi I-II bear an apical conical and curved process.

Type species: *Nasialialges borneensis* sp. n.

Nasialialges borneensis sp. n.

Female (fig. 1-2): Holotype 303 μ long (idiosoma in the midline) and 237 μ wide.

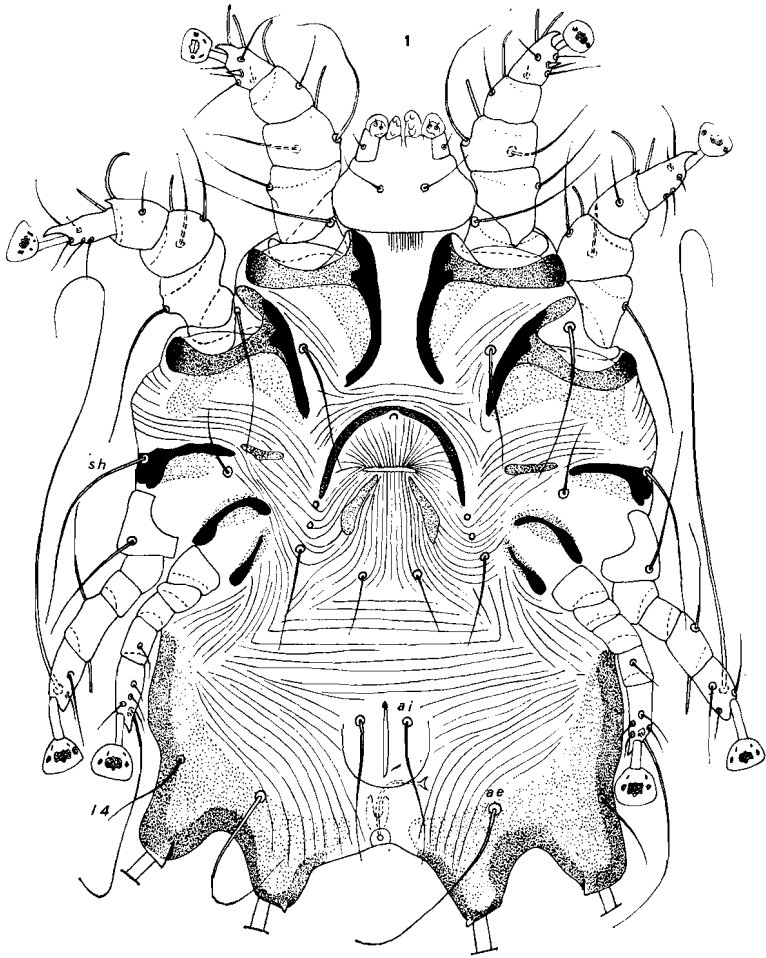


FIG. 1. — *Nasalialges borneensis* sp. n. Holotype female ventrally.

Dorsum : Propodonotal shield well sclerotized, longer than wide. Hysteronotum striated, without a shield. Posterior margin of body divided into 4 lobes bearing the *d* 5 and *l* 5 setae. *Venter* : All epimerae widely separated. Epigynium very long, hemicircular and separated from the epimerae I. Vulva transverse. There are only 2 pairs of genital setae. Anus ventral ; copulatory orifice

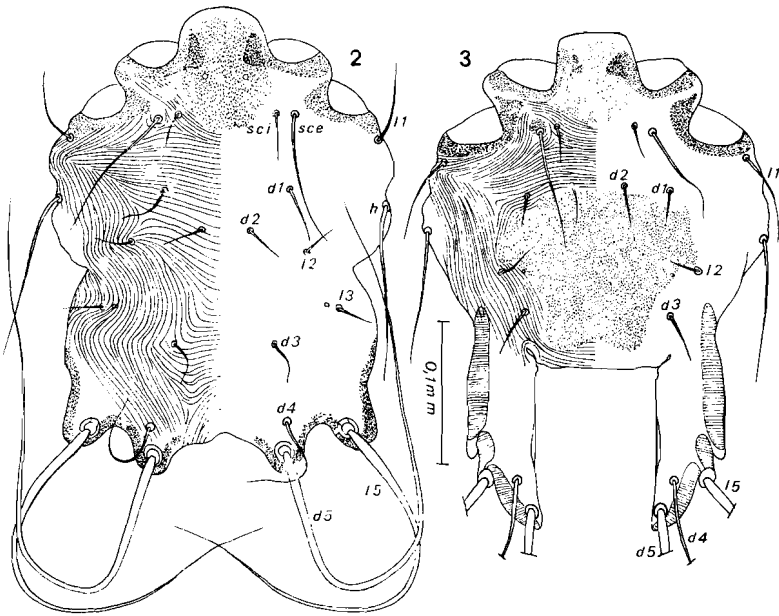


FIG. 2. — *Nasaliales borneensis* sp. n. Holotype female (2) and allotype male (3) dorsally.

behind the anus. *Legs* : Anterior legs thicker and slightly longer than posterior legs. All the legs with tarsal pedunculated suckers. Tarsi I-IV with 5-5-4-6 setae respectively.

Male (fig. 3-4) : Allotype 240 μ long (idiosoma in the midline) and 243 μ wide. Posterior lobes 120 μ long, 48 μ thick and 105 μ apart. *Dorsum* : Propodonotum as in the female. Hysteronotal shield wider (135 μ) than long (105 μ). *Venter* : Epimerae free. Penis curved, thick and short. Adanal suckers large, close to each other. Legs well developed, all ending in rather large pedonculate suckers. Tarsi I, II, IV ending in a conical, curved and pointed

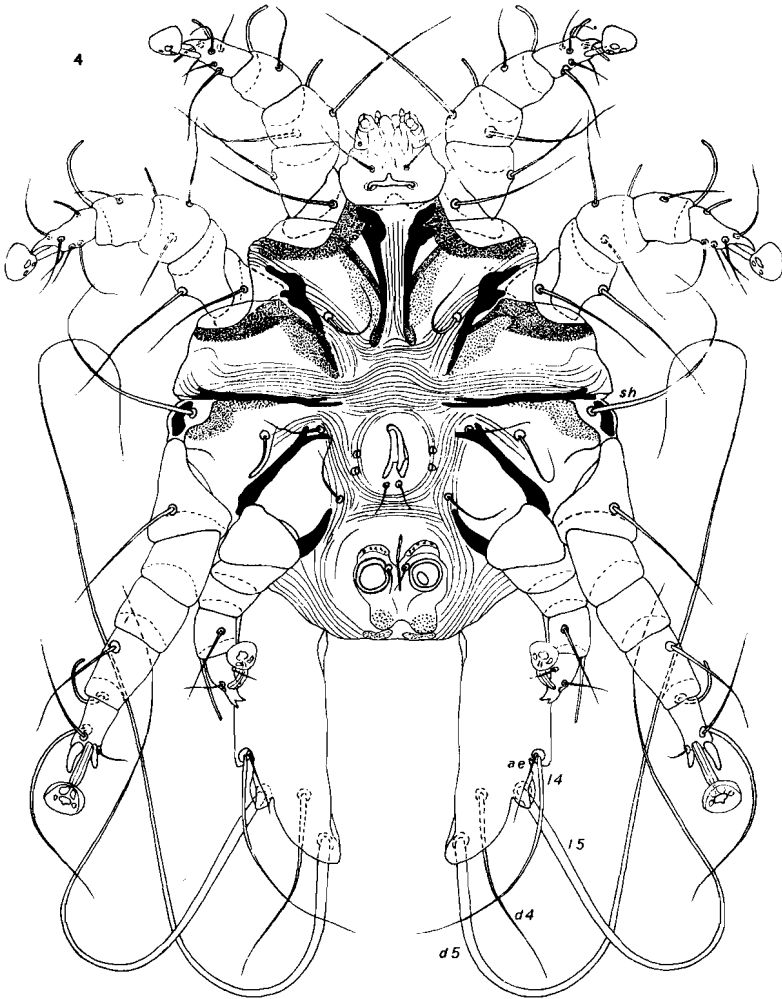


FIG. 4. — *Nasalialges borneensis* sp. n. Male in ventral view.

process. Tarsus III ending in a small ventro apical process and a larger dorso apical spine. Tarsus IV normally developed.

Host and locality :

From the ear canal of the Proboscis monkey, *Nasalis larvatus* WURMB, (Cercopithecidae, Colobinae) (S.R. n° 1101/1-15), East Malaysia, Sabah, Kuala Penyu District (N.E. Borneo), Malaysia. July 1977. Holotype and 6 female paratypes, allotype and 2 male paratypes, 3 tritonymphs and 1 larva. Holotype in the collections of Institut royal d'Histoire naturelle, Bruxelles. Paratypes in Institut for Medical Research, Malaysia and in the collections of the authors. The type host was shot near a rubber plantation. *N. larvatus* is confined to the island of Borneo where it has been found in the mangrove forest of the coast and estuaries and the riparian forest of the lower and middle reaches of major rivers. It is characteristically arboreal, but frequently descends to the ground. Ecological evidence suggests that this species evolved in Borneo as specialized offshoot of the ancestral colobine stock.

Acknowledgement

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References

- FAIN A., 1963. — Les Acariens producteurs de gale chez les Lemuriens et les singes avec une étude des Psoroptidae (Sarcoptiformes). *Bull. Inst. Roy. Sci. nat. Belgique*, XXXIX (32): 1-125.

Addendum

After this paper had been sent for publication we received from Prof. B.R. Laurence, of the London School of Hygiene and Tropical Medicine, several specimens of mites collected from *Presbytis* sp. from Kiaru, Kuala, Penyu, Malaysia, 6.V.1977. These mites also belong to *Nasaliages borneensis*. We thank Prof. B.R. Laurence who sent us these mites.
