A Contribution to the Ectoparasite Fauna of Bats in Thailand

II. Blood-Sucking Acari (Argasidae, Spinturnicidae and Macronyssidae)

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Abstract

*Argas pusillus* Kohls*, Ornithodoros batuensis Hirst*, *Spinturnix chiengmai Prasad*, *Anystropus conacheri* DelFino and Baker*, *Anystropus taprobanius* (Turk)*, *Meristaspis lateralis* (Kolenati)*, Eynhovienia euryalis* (Canestrini) (s. lat.)*, Paraperiglischrus rhinolophinus* (Koch) Paraperiglischrus analis Pan and Teng*, Bewsella feldermaus Domrow*, *Macronyssus tient* (Grokhovskaya and Nguyen-Huan-Ho)*, *Macronyssus* sp. (protonymph)*, Steatonyssus faini DelFino*, Steatonyssus* sp. 1 (male and protonymph)*, sp. 2 (protonymph)*, and sp. 3 (protonymph) are recorded as the blood-sucking parasites in this paper. The asterisked species are already listed in Hill and McNeely (1975).

The host animals examined in the present study had been collected by the junior author in his faunal survey of Thai mammals carried out in 1975. The first report on the taxonomic results (UchiKawa and Kobayashi in press), in which were dealt with 12 species of fur-mites belonging to the family Myobiidae, was also based on the same host sample.

The present report is restricted only to the blood-sucking acari. As in the previous paper, some specimens might be found on aberrant hosts, because a number of bat individuals of different species had been preserved together in only the three containers.

Synoptic List of the Parasites Collected

I. Argasidae (Ixodoidea)

1. *Argas* (Carios) pusillus Kohls*, 1950
   *Material examined*: 16 larvae, ex Scotophilus kuhlii, Yala, Thailand.

2. *Ornithodoros* (Reticulinasus) batuensis Hirst*, 1929
   *Material examined*: 3 larvae, ex Rousettus leschenaulti, Saraburi, Thailand.

II. Spinturnicidae (Mesostigmata)

1. *Spinturnix chiengmai* Prasad*, 1969
   The original description of this species was based on 7 females and a nymph from

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uncertain bats taken at Huai, Mae Sanam, Hod, Chiengmai (Prasad, 1969).
Material examined: 2 females, ex Scotophilus kuhlii, Yala, Thailand.

2. Ancystropus eonycteris DelFInado and Baker, 1963

Only a single female specimen, the holotype, from Eonycteris robsta from Mindanao represented this species in the original description. Recently, Hill and McNeely (1975) recorded the mite from Thai Cynopterus sphinx agulatus and Eonycteris spelaeus.

This least known species resembles Ancystropus zeloborii Kolenati, which is recorded from Uganda, Cyprus, Egypt, India, Philippines, Thailand, Vietnam, Malaya, Laos, New Guinea and Solomon Islands (Rudnick, 1960; Baker and DelFInado, 1964;

![Diagram of Ancystropus eonycteris](image)

Fig. 1. Ancystropus eonycteris, holotype female. Leg I: A; dorsal view, B; ventral view.

Prasad, 1969; Domrow, 1972; Hill and McNeely, 1975). As the construction and setation of leg I are distinctive, the leg of the holotype is depicted again in Fig. 1. Antero-dorsal seta ad₁ and postero-dorsal seta pd₁ on femur I, genu I and tibia I are barely discernible as circles in bases on both the holotype and present specimen. These setae are probably very minute and distinctly shorter than those of A. zeloborii. The form of the tritosternum differs from one another on the holotype and the present specimen (Fig. 2). The presternal area of the holotype is complicated according to over clearing, while that of the present specimen is compressed by coxae I. The tritosternum of A. eonycteris seems to be a remarkable structure consisting of a well sclerotized area
with antero-lateral projections followed by shallow lateral depressions and more weakly sclerotized, marginal parts.

Material examined: 1 female, ex *Eonycteris spelaea*, data uncertain.

3. Ancystropus taprobanius (TURK, 1950)

Ancystropus indicus HIReGAUDAR and BAL, 1955, from Indian *Rousettus leschenaulti*, which had been suggested to be identical with *A. taprobanius* by RUDNIK (1960), and Ancystropus rudnicki BAKER and DELFINADO, 1964, from *Rosettus, Cynopterus* and unidentified bats (BAKER and DELFINADO, 1964; PRASAD, 1969) were synonymized as *A. taprobanius* by DOMROW (1972).

Material examined: 2 females, ex *Rousettus leschenaulti*, Sarabri, Thailand; 1 female, ex *Scotophilus kuhlii*, Yala, Thailand.

4. Meristaspis lateralis (KOLENATI, 1856)

PRASAD (1969) recorded this mite from *Rousettus amplexicaudatus* in Thailand.

Material examined: 1 male, ex *Rousettus leschenaulti*, Saraburi, Thailand; 2 males and 1 female, ex *Eonycteris spelaea*, data uncertain; 1 male free in alcohol in the container.

5. Meristaspis mindanaoensis DELFINADO and BAKER, 1963

Sternal shield of male is large and flask-shaped, and bears only 3 pairs of setae. Metasternal and genital setae are situated very close to but clearly off the shield.

Material examined: 2 males and 4 deutonymphs, ex *Rousettus leschenaulti*, Saraburi, Thailand; 1 male, ex *Eonycteris spelaea*, data uncertain; 1 male and 1 deutonymph free in alcohol in the host container.

6. Eyndhovenia euryalis (CANESTRINI, 1884) (s. lat.)

Only a single male was examined. It was very small-sized specimen, and its all measurements fell within the range of those for DOMOROW's *Eyndhovenia* mites parasitic on *Rhinolophus megaphyllus* in New South Wales.
Material examined: 1 male, ex *Hipposideros lavatus*, Tam Tur Toa, Thailand, September 1, 1975.

7. **Paraperiliglischrus rhinolophinus** (C.L. Koch, 1841)

8. **Paraperiliglischrus analis** Pan and Teng, 1973
   *Paraperiliglischrus hipposideros* Baker and Delfinado, 1964, has been recorded as the parasite of *Hipposideros armiger armiger* (Hill and McNeely, 1965) and *Hipposideros* sp. (Prasad, 1969) from Thailand. The status of *P. hipposideros* Baker and Delfinado is obscure as discussed in Uchikawa (in press), and all the Thai specimens are tentatively identified as *P. analis* Pan and Teng.
   Material examined: 1 male and 1 female, ex *Hipposideros lavatus*, Muang Ngai, Thailand, September 2, 1975; 1 female, ex *Hipposideros armiger*, Muang Ngai, September 2, 1975; 1 female, ex *Cynopterus sphinx*, Cheing Mai, September 10, 1975; 1 male and 1 female free in alcohol in the host container.

### III. Macronyssidae (Mesostigmata)

1. **Bewsiella fledermaus** Domrow, 1958

2. **Macronyssus tieni** (Grokhovskaya et Nguen-Huan-Hoe, 1945)
   The type host of this mite is *Hipposideros armiger* from Vietnam.

3. **Macronyssus sp.** (Protonymph)
   Idiosoma 340–370 μ long by 205–223 μ wide at level of stigma. Podosomal shield 160–165 μ long, 125–130 μ wide at level between setae s₄ and s₅, granulated finely, bearing 10 pairs of setae; setae j₄–₆ and z₅ minute and marginal setae long. Pygidal shield with 7 pairs of setae; J₃ and J₅ minutes; J₄ very minute and barely discernible; S₄ and Z₄ slightly longer than J₃ and J₅; S₈ considerably long and Z₅ being longest. Eleven pairs, including j₁, of setae on unarmed dorsum. A pair of caudal, marginal and 4 pairs of ventral setae on soft cuticle.
Material examined: 2 protonymphs, ex *Tylonycteris* sp., Yala, Thailand.

4. **Steatonyssus faini** DELFINADO, 1960

*Material examined:* 1 female, ex *Scotophilus kuhlii*, Yala, Thailand.

5. **Steatonyssus sp. 1** (Male and protonymph)

   This male mite is distinctive in having very minute opisthosomal dorsal setae both on and off the dorsal shield. The protonymphs, posterodorsal setae of which were considerably weaker than those on podosomal region, were taken together with the male. Both forms are tentatively dealt with as the same species.

*Material examined:* 1 male and 3 protonymphs, ex *Myotis* sp. Yala, Thailand.

6. **Steatonyssus sp. 2** (Protonymph)

   All dorsal setae, exclusive of J₅ on pygidial shield, and posteriormost 2 pairs of ventral setae are well developed, though they are not even (38–78 μ long). A single specimen was taken together with the female of *S. faini*, but the identity of the both forms was not confirmed.

*Material examined:* 1 protonymph, ex *Scotophilus kuhlii*, Yala, Thailand.

7. **Steatonyssus sp. 3** (Protonymph)

   This mite is very close to *S. javensis brevisetosus* TILL and EVANS, 1964, but is not identified.

*Material examined:* 2 protonymph, ex *Scotophilus kuhlii*, Yala, Thailand.

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Southwestern face of Mt. Kinabalu viewed from Kundassang (ca. 1,300 m); the foot-hill of the mountain is covered with a montane oak forest.

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