

## TWO NEW SPECIES OF *PENENIRMUS* (MALLOPHAGA: ISCHNOCERA) FROM ASIAN BARBETS (PICIFORMES: CAPITONIDAE)

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### Abstract

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*Penenirmus zeylanicus* from *Megalaima zeylanica* and *P. rafflesi* from *Megalaima rafflesi* are both described as new. *Penenirmus* from African barbets are listed and the new species compared with those known from the Picidae.

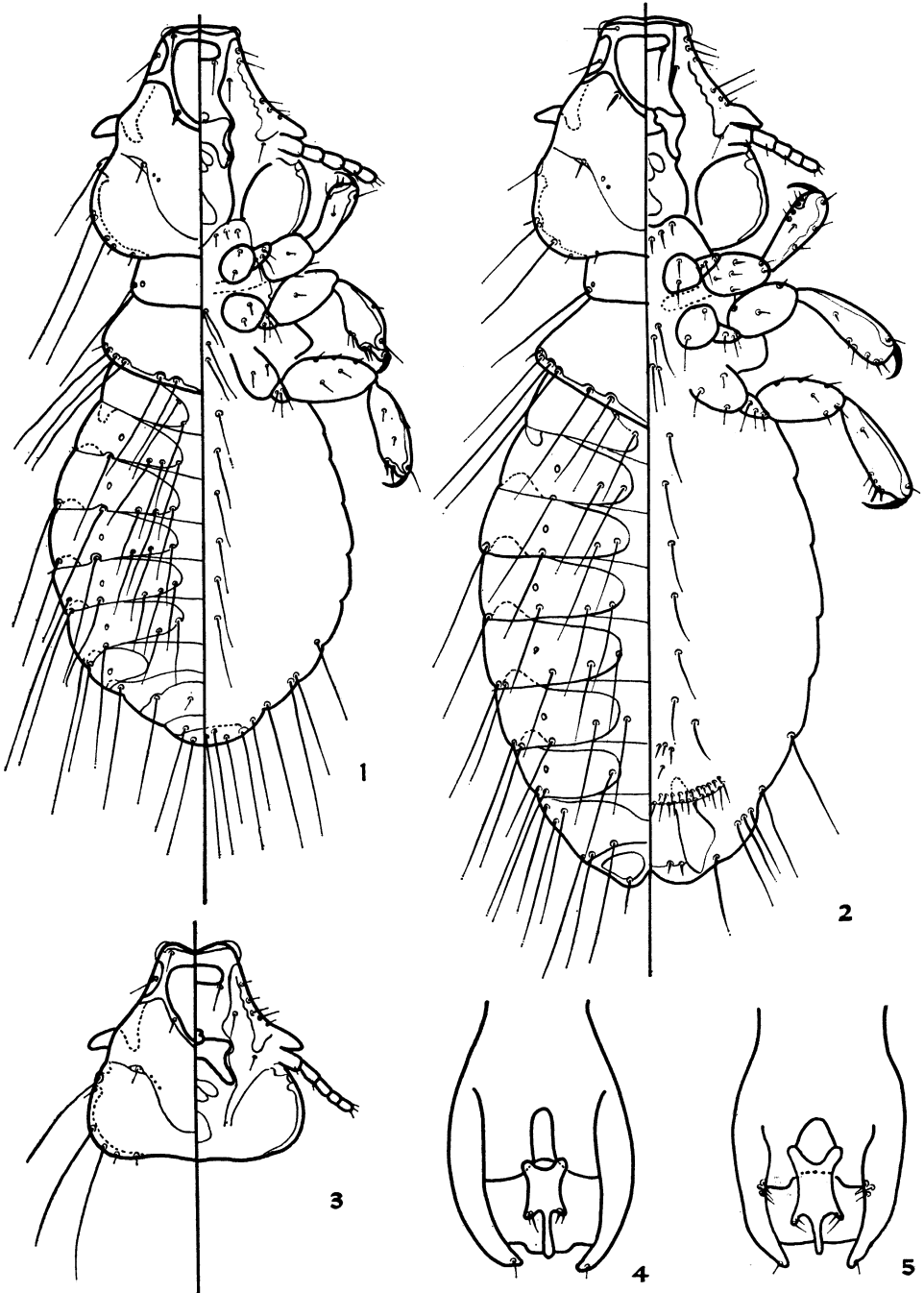
While revising the *Penenirmus* from the Picidae (Piciformes), a small collection of two hitherto undescribed species of *Penenirmus* from the Capitonidae was received from Dr. K. C. Emerson, of Arlington, Va. These, together with the following, represent the known species of *Penenirmus* from the Capitonidae: *P. guineensis guineensis* Tendeiro, 1961, from *Lybius dubius*; *P. g. bidentatus* Tendeiro, 1961, from *Lybius bidentatus aequatorialis* and *Lybius b. bidentatus*; *P. zumpti zumpti* Tendeiro, 1961, from *Lybius t. torquatus*; *P. z. leucomelan* Tendeiro, 1961, from *Tricholaema l. leucomelan* and *T. leucomelan (zuluense?)*.

### *Penenirmus zeylanicus* new species

Type host: *Megalaima zeylanica* (probably *hodgsoni* Bonaparte).

The position of marginal temporal seta 1 and details of the male genitalia distinguishes this species from *rafflesi*.

Head length approximately equal to width (Figs. 1, 2). Anterior margin of forehead sclerotized. Temples rounded and bearing two pairs of elongate and three pairs of short marginal setae. Marginal temporal seta 1 short and adjacent to elongate marginal temporal seta 2. Postantennal suture present. Pterothorax with a dorsal centroposterior group of two elongate setae each side. Tergites II-VIII deeply notched or divided, IX entire. Sternites lightly sclerotized and



FIGS. 1-3. Dorsal-ventral views drawn to the same scale. 1, *P. zeylanicus* n. sp., male; 2, *P. zeylanicus* n. sp., female; 3, *P. rafflesi* n. sp., head of male. FIGS. 4-5. Apical portions of male genitalia drawn to the same scale. 4, *P. zeylanicus*; 5, *P. rafflesi*.

inconspicuous. Segments III–VI each with 5–7 (male), 3–5 (female), elongate tergoventral setae, and 1 pair of shorter sternocentral setae.

Male genitalia (Fig. 4) lacking sclerites at the base of the penis. Setae at base of proximal margin of parameres inconspicuous. Female with well-developed subventral sclerites.

Dimensions in millimeters: *Male*: total length, 2.15–2.36; head length, .67–.68; head width, .64–.67; prothorax width, .40–.45; pterothorax width, .64–.70; abdominal width, .90–.92. *Female*: total length, 2.61–2.77; head length, .72–.75; head width, .70–.73; prothorax width, .41–.46; pterothorax width, .68–.75; abdominal width, 1.02–1.10.

Holotype male, three male and nine female paratypes from *Megalaima zeylanica* (probably *hodgsoni* Bonaparte) from Thailand: Chiangmai; Hod, Ban Bo Kaeo, 6 Feb. 1962, Mr. Kitti Thonglongya, V 425. Two male and four female paratypes from the type host from Thailand: Chiangmai; Huai Mae Sanum Hod, 9 Nov. 1962, SEATO Medical Research Lab., SMRL #1813. The holotype will be deposited in the United States National Museum.

#### ***Penenirmus rafflesi* new species**

Type host: *Megalaima rafflesii* (Lesson).

Known only from one male, which is readily distinguished from the previous species by the position of marginal temporal seta 1 and by details of the male genitalia.

The head, thorax, and abdomen are as described and figured for *zeylanicus* except that marginal temporal seta 1 is adjacent to the ocular seta (Fig. 3) rather than marginal temporal seta 2.

Male genitalia (Fig. 5) with three pairs of short, stout setae at the base of the proximal margin of the parameres. Basal sclerites of penis absent.

Dimensions of male, in millimeters: total length, 1.93; head length, .64; head width, .63; prothorax width, .36; pterothorax width, .55; abdominal width, .75.

The holotype male from *Megalaima rafflesii* from Malaya: Subang, 28 Mar. 1962, M-01306, will be deposited in the United States National Museum.

These two species represent the only known *Penenirmus* from Asian barbets. They differ from species known from African Barbets in details of the genitalia, head, and abdomen. They are readily distinguished from species known from the Picidae, in that the latter lack both the sclerotized anterior margin of the forehead and postantennal suture, have tergites entire or at most notched, and have a pair of sclerites at the base of the penis.

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**Two New Species of *Penenirmus***  
**(Mallophaga: Ischnocera)**  
**from Asian Barbets**  
**(Piciformes: Capitonidae)**

*by*

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