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

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Abstract


Penenirmus zeylanicus from Megalaima zeylanica and P. rafflesii from Mega-
laima rafflesii 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 collec-
tion 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 rafflesii.

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. raffles* n. sp., head of male. Figs. 4-5. Apical portions of male genitalia drawn to the same scale. 4, *P. zeylanicus*; 5, *P. raffles*. 
inconspicuous. Segments III–VI each with 5–7 (male), 3–5 (female), elongate tergocentral 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 subvulval 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 *bodgsoni* Bonaparte) from Thailand: Chiangmai; Hod, Ban Bo Kao, 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 rafflesii** 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.

I am indebted to Dr. K. C. Emerson for the loan of these specimens and for his critical review of this manuscript.

(Received 13 January 1967)
Two New Species of *Penenirmus*  
(Mallophaga: Ischnocera)  
from Asian Barbets  
(Piciformes: Capitonidae)

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Reprinted in Canada from  
THE CANADIAN ENTOMOLOGIST  
Volume 99, Number 6  
June, 1967