TWO NEW SPECIES OF EOMENOPON HARRISON
(Malophaga: Menoponidae) WITH A NOTE ON
THE STRUCTURE OF THE GENITAL SAC

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Abstract: Two new species of Eomenon are described: ryanii from Psitteuteles johnstoniae from the Philippines and patoni from Glossopsitta porphyrocephala from Australia. A discussion and illustrations are given to differentiate the genital sacs of the known species of the genus.

The 10 currently recognized species of Eomenon Harrison have been discussed by Price (1966). Since that study, I have received additional series of lice that represent 2 undescribed species of this genus. Additionally, during the examination of these specimens, it became evident that the vestiture of the ♂ genital sac is of taxonomic value, a feature that had been overlooked in the earlier work on Eomenon. It is my purpose here to describe the 2 new species and to discuss the importance of the ♂ genital sac as a further feature for species separation.

The 2 species to be described here are both members of the spinimento-group; the characters given by Price (1966) for lice of this group as well as for lice of the entire genus will not be repeated.

Eomenon ryanii Price, new species Fig. 6, 9-12.

Type-host: Psitteuteles johnstoniae (Hartert).

♀. Gross features as given by Price (1966: fig. 3) for E. spinimento (Neumann). Metanotum with 26-27 lateroanterior setae. Marginal tergal setae: I, 32-35; II, 34-36; III, 35-38; IV-V, 38-41; VI, 36-40; VII, 31-36; VIII, 23-27. Pleurites with moderately developed internal thickening (Price, 1966: fig. 33). Comb row on sternite III well developed, each with 13-18 spiniform setae; sternite IV with 2-5 compact or scattered short spiniform setae on each side. Marginal sternal setae, exclusive of short spiniform setae on III-IV: I, 15-18; II, 29-33; III, 24-27; IV, 33-36; V, 33-38; VI, 31-35; VII, 23-24. Anterior sternal setae: II, 19-23; III-V, 21-26; VI, 20-22; VII, 19-21. Ventral terminalia as in fig. 9; fused sternites VIII-IX with 45-49 medium to long anterior setae, medium setae lateral to very long setae on lateroposterior margin from 2+3 to 4+4, and 12-14 medium setae on each medioposterior side. Ventral anal fringe with 6-8 short setae on each side, 19-25 longer median setae; dorsal anal fringe with 47-51 setae. Internal structure of genital chamber (fig. 10) much wider than long, 0.21-0.24 mm wide, with well defined border of approximately uniform thickness anteriorly and posteriorly, and with degree of anterior indentation.

♂. Differs from ♀ as follows. Tendency for more marginal tergal setae: I, 34-38; II, 36-
39; III, 39-40; IV, 38-40; V-VI, 40-41; VII, 39; VIII, 30-31. Sternite IV with only 0-2 short spiniform setae on each side. Marginal sternal setae, exclusive of short spiniform setae on III-IV; I, 17; II, 32; III, 27-32; IV, 37-38; V, 35-40; VI, 32-33; VII, 28-32. Sternte VIII with 20-21 marginal, 18 anterior setae. Ventral terminalia as in fig. 11; sternite IX marginally with 55-58 setae, submarginally with 6-7 very long setae, and medioanteriorly with patch of 13-16 setae. Genitalia as in fig. 12. Large and complex with evenly curved left paramere; total length of genitalia 1.34-1.50 mm. Vestiture of genital sac close to that of fig. 6, with basal portion having larger irregular denticles and few fine spinules, lateroanterior 1/3 or so having smaller irregular denticles and stout spines, and without conspicuous ornamentation diagonally between these regions.

Dimensions (in mm): Preocular width, ♀ 0.48-0.50, ♂ 0.49-0.50; temple width, ♀ 0.62-0.65, ♂ 0.64-0.65; head length, ♀ 0.35-0.37, ♂ 0.35-0.37; prothorax width, ♀ 0.48-0.52, ♂ 0.48-0.51; metathorax width, ♀ 0.62-0.64, ♂ 0.61-0.64; total length, ♀ 2.54-2.63, ♂ 2.83-2.96.

Holotype ♂ (Bishop 8238), Trichoglossus johnstoniae, Philippine Is., Mindanao, Cotabato, Tupi, Kablon, Mt. Matutum, 3700-5500 m, 16.VI.1966, N. Wilson (2582); in the collection of Bishop Museum, Honolulu, Paratypes: 5 ♀♀, same data as holotype; 2 ♀♂, 1 ♂, same as holotype, except 2500-3700 m, 27.VI.1966 (3314); 5 ♀♀, same as holotype, except 2500-3700 m, 28.VI.1966 (3342, 3345).

Eumenopus ryani is closest morphologically to E. denticulatum Harrison, E. cardinalis Price, and E. semilunare (Piaget). The ♂♂ are separable on the basis of the vestiture of the genital sac; additionally, the ♂♂ of E. denticulatum and E. semilunare have only 5-10 medioanterior setae on the genital plate and those of E. cardinalis have a significantly larger temple width of 0.70-0.74 mm. The ♀♀ of E. cardinalis have a pronounced gap between the shorter and longer setae on the lateroposterior margin of fused sternites VIII-IX and have a larger temple width of 0.68-0.71 mm; the ♀♀ of E. semilunare have an internal genital chamber structure of different shape; the ♀♀ of E. denticulatum have only 0-2 setae lateral to longer setae on the lateroposterior margin of fused sternites VIII-IX and usually have the anterior border of the internal genital chamber structure thicker than the posterior border.

Eumenopus patoni Price, new species

Type-host: Glossopsitta porphyrocephala (Dietrichsen).


Fig. 1-14. 1-8. ♂ genital sac (X110): 1, *Eomenopon placentis* Price; 2, *E. patoni* n. sp.; 3, *E. clissoldi* Price; 4, *E. beeri* Price; 5, *E. cardinalis* Price; 6, *E. ryani* n. sp.; 7, *E. spinimentum* (Neumann); 8, *E. wilsoni* Price. 9-12. ♀ ventral terminalia (X90); 10, ♀ internal genital chamber structure (X160); 11, ♂ ventral terminalia (X90); 12, ♂ genitalia (X70). 13-14. ♀ ventral terminalia (X90); 14, ♂ genitalia (X70).
as in fig. 2, with basal portion grossly similar to that of *E. ryani*, but distal 1/3 or so with small irregular denticles and stout spines entirely across sac, and without conspicuous ornamentation across median portion.

Dimensions (in mm) consistently smaller than for *E. ryani*: Preocular width, ♀ 0.44-0.45, ♂ 0.44-0.46; temple width, ♀ 0.59-0.60, ♂ 0.59-0.63; head length, ♀ 0.31-0.33, ♂ 0.32-0.33; prothorax width, ♀ 0.44-0.45, ♂ 0.44-0.47; metathorax width, ♀ 0.57-0.61, ♂ 0.55-0.60; total length, ♀ 2.14-2.26, ♂ 2.37-2.51.


♀ Genital Sacs of *Eumenopon* species Fig. 1-8.

A study of the vestiture of the ♀ genital sacs has convinced me that the size and shape of the denticles as well as their distribution often furnish evidence supporting species separation within *Eumenopon*. Aside from *E. chlorocerci* Price, for which the ♀ is still not known, I was able to examine a minimum of 2 ♀♀ for each of the remaining 11 species of *Eumenopon* and I found the vestiture surprisingly consistent within a species and capable of being classed into 8 distinguishable types (fig. 1-8). No particular reliance should be placed on the gross shape of the large membranous sac itself since this is understandably variable.

The sacs of *E. clissoldi* Price and *E. placentis* Price, the only 2 known species of the *clissoldi*-group, are distinctive from those of the species of the *spinimentum*-group in having elongate very large denticles on the basal 1/2 and in lacking ornamentation across the apical end, except for the usual striated area characteristic of all the sacs. The large basal denticles of *E. clissoldi* (fig. 3) are grouped fairly compactly and are distinctly pointed at the end directed toward the base of the sac; those of *E. placentis* (fig. 1) are more irregular, scattered, and, when pointed, the point arises laterally.

The sac as shown in fig. 4 is representative of that for *E. beeri* Price, *E. denticulatum*, *E. semilunare*, and *E. sintillatae* Price. This type is characterized as having fairly large irregularly rounded denticles, intermixed with smaller denticles and occasional spinules, continuous along the apical 2/3 to 3/4; the basal portion has abundant long slender spinules.

Probably the sac coming closest to the above type is that of *E. spinimentum* (fig. 7), but with this the denticles are often obviously pointed, somewhat larger across the middle 1/3 than apically.

The previously described sacs of *E. ryani* (fig. 6) and *E. patoni* (fig. 2) are unique in having the comparatively unornamented area separating the smaller apical denticles from the much coarser basal ones.

The compactly arranged fairly regularly shaped small denticles across the apical 1/2 of the sac of *E. cardinalis* (fig. 5) make this highly characteristic and easily separated from the other types; the arrangement of these denticles, especially in the center of the area, is almost whorled fingerprint-like. A small unornamented zone separates these from the larger basal denticles.

With only sparse small fine denticles and blunt spines, an irregular unornamented
central area, and a laterobasal area of fine slender spinules, the sac of *E. wilsoni* Price (fig. 8) is the only one lacking larger denticles of some type somewhere on the sac.

REFERENCE