

A NEW SPECIES OF *LAGRIOMORPHA*, WITH OBSERVATIONS ON THE SYSTEMATIC POSITION OF THE GENUS (COLEOPTERA: ANTHICIDAE)¹

By Daniel K. Young²

Abstract: A new species of the previously monotypic genus *Lagriomorpha* Champion, *L. indigacea*, is described from New Guinea. Salient anatomical features of the adults (relative development of the prothoracic coxal cowl and internal flange of the metathoracic coxae) suggest a close relationship between *Lagriomorpha* and the heteromorous family Anthicidae.

While sorting through a recent loan of undetermined pedilids and pyrochroids from the Bishop Museum, I discovered the species described below along with several additional undescribed species of the heteromorous genus *Lagriomorpha* Champion. My purpose in describing *L. indigacea*, n. sp. at this time is to provide a name for this elegantly colored insect in time to be available for use in a book on the beetles of New Guinea about to be completed by J. L. Gressitt & R. W. Hornabrook (1977, plate 2, d). The remaining undescribed species will be described at a later date as part of a review of the entire genus.

***Lagriomorpha indigacea* Young, new species**

FIG. 1-5

Description. Length 7-10 mm. Head and elytra moderately covered with short, semierect setae, surface of pronotum more densely, decumbently setose; ventral surface of body moderately covered with shorter, semierect setae.

♂. **Head** metallic blue-violet to metallic bluish green, frequently with slight coppery hue; labium, maxillae and anterior margins of clypeus and labrum amber to rufo-piceous, mandibles rufo-piceous to black. Dorsal surface of head confusedly, coarsely punctate, ventral aspect with punctures less coarse; fronto-clypeal suture present. Antennae with basal portion of 1st segment amber to rufo-piceous, terminal segment (and in some specimens variable portions of penultimate segment) pale yellowish brown to amber, remaining articles dark metallic blue-violet; antennae covered with stout, semierect and erect setae, the latter being scattered along length of terminal segment but limited to subapical areas of remaining segments. Terminal segment of maxillary palpus (FIG. 1) moderately securiform, width at apex 2x basal width. **Pronotum** subcampanulate, widest anterad of middle, densely covered with yellowish gold setae dorsally, coarsely punctate with surface finely punctulate between the larger, circular punctures. Scutellum trapezoidal, metallic blue-violet, finely punctate, sparsely setose. Prosternum and lateral aspects of pronotum metallic blue-violet to metallic blue-green, the 2 sclerites fused anteriorly, separated posteriorly by a sigmoid pleurosternal suture. Anterior coxal cavities widely open externally, closed internally. Mesosternum and metasternum metallic blue-violet to metallic blue-green; mesoepisterna meeting anteromesad of mesosternum. Legs metallic blue with violaceous or rufo-piceous lustre; tibial spurs short, stout; tarsal claws simple; internal flange of metathoracic coxae reduced. Elytra: surface metallic blue-violet to metallic blue-green with dense patches of grayish white to white setae forming a transverse band just beyond basal 1/2, briefly interrupted near sutural margin where it attains its greatest width, gradually narrowing toward lateral margins;

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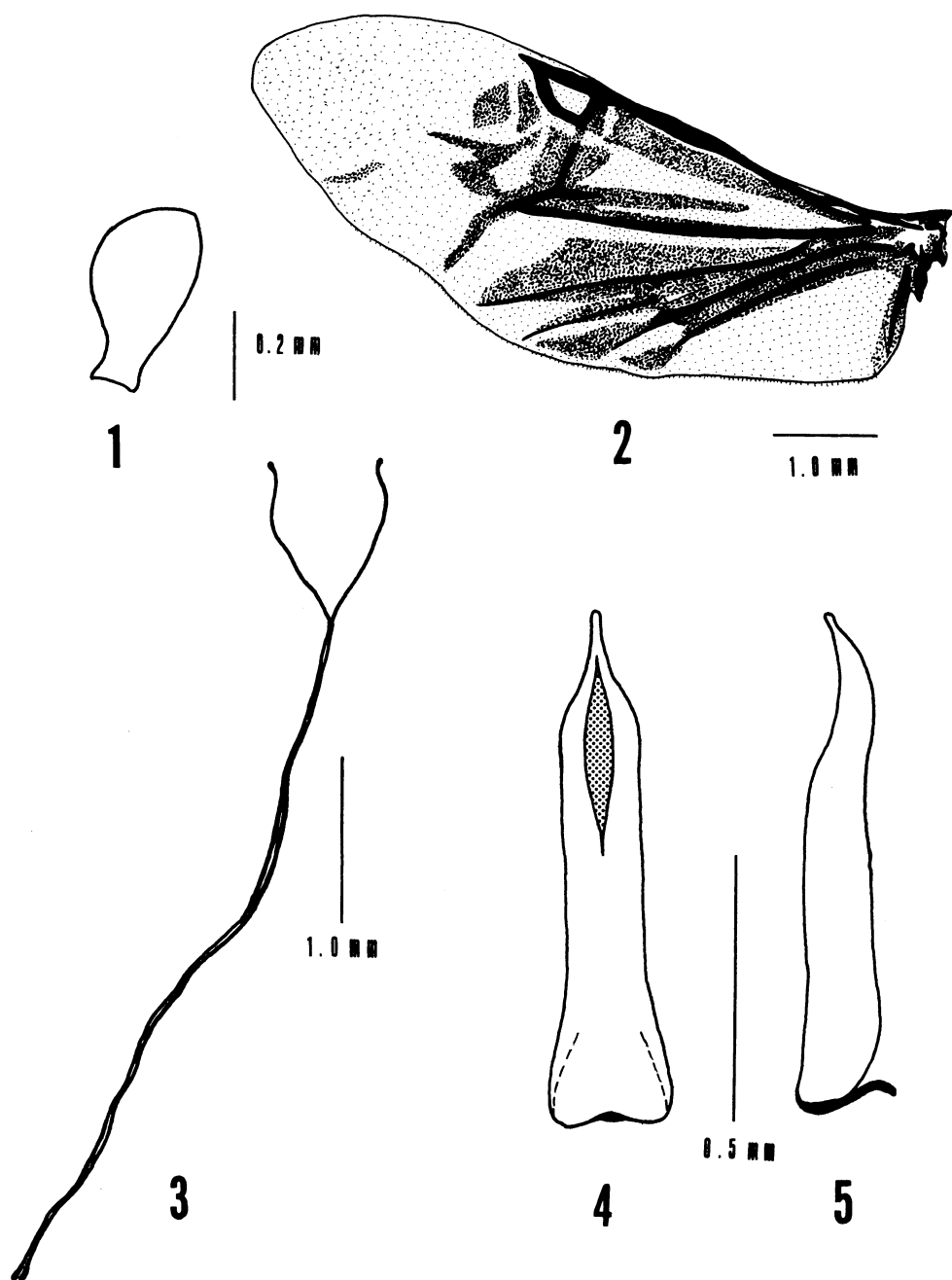


FIG. 1-5. *Lagriomorpha indigacea*, n. sp., adult ♂: 1, terminal segment of right maxillary palpus, ventral view; 2, left metathoracic wing; 3, spiculum; 4-5, tegmen: (4) lateral view, (5) ventral view.

elytra elongate, covering abdomen, slightly broader posteriorly with apices moderately separated along suture, confusedly punctate with moderately coarse circular punctures which are separated from one another by about their own diameter, surface between punctures sparsely punctulate. Metathoracic wings (FIG. 2) well developed, radial cell present, wedge cell lacking. *Abdomen* with ventral surface metallic blue-violet to metallic blue-green, mesal length of 3rd (1st visible) sternite 0.75× that of metasternum, apical margin of 7th sternite broadly, shallowly sinuate, that of 8th sternite moderately emarginate. Spiculum (FIG. 3) Y-shaped with lateral arms originating in membrane ventrolaterad to distal margins of 9th tergite. Tegmen (FIG. 4, 5) with lateral aspects subparallel throughout much of their length, abruptly convergent distally thus forming a blunt awl-shaped structure, surface finely punctulate, more densely so distally. Median lobe 4× length of tegmen, styliform, frequently protruding somewhat from abdomen in preserved specimens.

♀. Differs outwardly from ♂ by having the 8th abdominal segment more elongate with the distal margin of the 8th sternite entire or but shallowly sinuate mesally.

TYPE INFORMATION. In the following summary of label data from material examined, the island of New Guinea is divided into 4 sectors as described by Gressitt & Hart (1974: 263).

Holotype ♂ (BISHOP 11,136), PNG (NE New Guinea): Morobe Distr., Wau, 1270 m, 7.V.1962, J. Sedlacek; allotype, ♀ (BISHOP), same data as holotype except 1200 m, 1-4.X.1962; paratopotypes: 19 ♂♂, 15 ♀♀ (BISHOP); paratypes: 140 ♂♂, 66 ♀♀ as follows: PNG (NE New Guinea): Wau, 27 collections, elevations from 1200-2300 m, 1962-1966, taken during every month except VI, XI, & XII (122 ♂♂, 50 ♀♀); Edie Ck., nr Wau, 2050 m, 31.III.1966, J. L. Gressitt (1 ♀); Mt Missim, 1600-2000 m, 21-24.IX.1964, M. Sedlacek (11 ♂♂, 7 ♀♀); Mt Kaindi, 2200-2350 m, 10-11.I.1965, J. & M. Sedlacek (1 ♀); same data as preceding except 25.III.1965, J. Sedlacek (1 ♀); Purosa, 20-26 km SE of Okapa, 1800-2020 m, 28.VIII.1964, J. & M. Sedlacek (4 ♂♂, 1 ♀); Moife, 2100 m, 15 km NW of Okapa, 7-14.X.1959, T. C. Maa (1 ♀); Feramin, 150-120 m, 11-12.V.1959, W. W. Brandt (1 ♂); Tifalmin, 1350 m, 19.VIII.1963, R. Straatman (1 ♀); Western Highlands, Goiburung, E of Korn Farm, 1560-1650 m, 16.X.1958, Gressitt (1 ♂); Eastern Highlands, 10 km NE of Lufa, 1800-2100 m, 21.I.1966, J. & M. Sedlacek (1 ♀); Mt Amingwiwa, 8000 m, 15.IX.1970, Gressitt (1 ♀); Simbai, Bismarck Range, 1900 m, 29.V.1966, Gressitt (1 ♀). IRIAN (NW New Guinea): Vogelkop, Sururai Vill. area, W shore Lake Anggi Giji, 1850 m, 25.VII.1957, D. Elmo Hardy (1 ♂); Swart Val., W ridge, 1800-2000 m, 19.XI.1958, Gressitt (1 ♀). Paratypes are deposited in the collections of the Bishop Museum (BISHOP), the British Museum of Natural History (BMNH), the California Academy of Sciences (CASC), Michigan State University (MSUC), the U. S. National Museum of Natural History (USNM), and that of the author (DYCC).

DISTRIBUTION. As detailed above, *L. indigacea*, n. sp. is known only from New Guinea, with collections having been made in the northeastern sector, "PNG (NE New Guinea)," primarily in and around Wau, and 2 specimens from Irian Jaya, "IRIAN (NW New Guinea)."

REMARKS. The only other species currently recognized in the genus *Lagriomorpha* is *L. semicoerulea* Champion. Through the kindness of C. M. F. von Hayek and R. Aldridge of the British Museum of Natural History, a male and female of this species were made

available to me for comparison. The most striking difference between the 2 species is their color, and they may easily be distinguished on the basis of elytral coloration, those of *L. indigacea* being metallic blue-violet with a grayish white to white transverse band and those of *L. semicoerulea* rufo-testaceous basally and metallic blue throughout the distal 2/3. Anatomically, the most significant differences are in the shape of the terminal segment of the maxillary palpi (strongly securiform in *L. semicoerulea* and but moderately so in *L. indigacea*) and in specializations associated with the tibiae (those of *L. semicoerulea* bearing 2 fine carinae which are completely lacking in *L. indigacea*).

Virtually nothing is known of the bionomics of *Lagriomorpha* at present, and Gressitt (in litt.) has informed me that he has not seen a specimen of *L. indigacea* for years, though he used to come across them quite frequently.

SYSTEMATIC POSITION

The genus *Lagriomorpha* was erected by Champion (1916) for his *L. semicoerulea* of "Mysol" (=Misool) and "Waigiou" (=Waigeo), 2 small islands off the western coast of NW New Guinea (IRIAN). Referring to Blair's (1913) discussion of the systematic position of several closely related taxa, Champion placed the new genus in the family Anthicidae. However, the taxon remained little known and its association with several other aberrant genera led to a state of confusion. The relative position of *Lagriomorpha* remained unclear until 1928 when, in his contribution to the *Coleopterorum Catalogus*, Blair included the taxon at the end of the Pyrochroidae, stating, "The following genera formerly included in the Pyrochroidae are probably better placed in the family Anthicidae, but having not appeared in the catalogue of this family, Pic, in *Col. Cat.* pars. 36, 1911, are here given for convenience." Unfortunately, the mere listing of *Lagriomorpha* and its allies with the pyrochroids has served to keep the association alive and Blair's note has apparently been overlooked by many.

The presence of internally closed prothoracic coxal cavities immediately separates *Lagriomorpha* adults from those of the Pyrochroidae. In addition, the internal flange of the metathoracic coxae (*sensu* Crowson 1955) is reduced in *Lagriomorpha*, as is typical for the anthicids; the flange is well developed in all of the pyrochroids I have examined and is visible externally as a well developed sulcus. Based upon these observations, I submit that Champion and Blair were correct in referring *Lagriomorpha* to the Anthicidae near *Lemodes* Boheman. It should, perhaps, be noted that in his recent remarks on the classification of the Heteromera, Lawrence (1977) still lists *Lemodes* as a pyrochroid. He does, however, go on to state that *Lemodes* is an aberrant pyrochroid "which may be removed when immature stages are discovered."

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