

## INDO-AUSTRALIAN *POMPILIDAE* (Hym.)

### I. *Leptodialepis* *bipartitus* (LEP.) and some similarly coloured species

by

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In 1897, BINGHAM (Fauna Br. India, Hym. I) treated all the Oriental *Pompilidae*, presently regarded as *Hemipepsini* and *Cryptocheilini* (BRADLEY, Notulae Naturae 145, 1944), under the generic name *Salius*. Since then, various authors have established new generic names for certain groups of these insects.

Unfortunately, in several cases inadequately described species of previous authors have been selected as types of the new genera. This appears to be a dangerous practice in a group where misidentifications of the "old" species are of such frequent occurrence.

The phenomenon of the existence of several Müllerian mimicry colour associations in the *Pompilidae*, discussed by ARNOLD (Annals Transvaal Mus. 14: 288, 1932) for the Ethiopian species, is equally well developed in the Oriental representatives of this family. Certain colour patterns occur in groups that are morphologically very distinct, and as most of the old descriptions are based upon colour characters only, correct identification of such species is often extremely difficult.

"*Calicurgus bipartitus*", described by LEPELETIER in 1845, is a case in point. Judging by the description, this might be a *Hemipepsis* as well as a *Cyphononyx* or a *Leptodialepis*, for Oriental species with the coloration described by LEPELETIER are found in all three genera. A study of extensive collections of *Pompilidae* from the type locality (Java) has enabled me to identify this insect with reasonable certainty as a species of *Leptodialepis*. Previous authors, however, have erroneously used this name for certain species of *Cyphononyx* occurring in India and the Philippines. Recently one of these species has also been found in Java, but it appears to be so extremely rare here, that it is highly improbable that LEPELETIER had this insect before him and not the fairly common *Leptodialepis*.

In 1895 BINGHAM (Ann. Mag. Nat. Hist. (6) 16: 442) recorded a Pompilid wasp from the Philippine Islands (Luzon) as *Salius peregrinus* (SM.), at the same time remarking that a *Salius* from Sumatra in the

British Museum, labelled *bipartitus* LEP. in F. SMITH's own handwriting, was "nothing more or less than a large fine specimen of *peregrinus*". Specimens from Sikkim, Burma and Tenasserim, in an earlier publication (Jl. Bombay Nat. Hist. Soc. 8: 375, 1893) recorded under the latter name, were then identified with *bipartitus* in his later works. In the *Hymenoptera*-volume (I) of the "Fauna of British India" (1897), the description is based upon a *Cyphononyx*, for in the key (p. 125) the claws are said to be bifid in the female; the figure on plate II, however, seems to represent a true *bipartitus*.

ASHMEAD (Proc. U.S. Nat. Mus. 23: 132, 1904) followed BINGHAM in regarding *bipartitus* as a species with bifid claws in the female sex, and made it the type of a new genus, *Pseudosalius*. Actually he proposed this name: "for a ceropalid found in the Philippines, in our catalogues under the name *Salius bipartitus* LEPELETIER. A study of a specimen shows that it is not a *Salius*, but comes closer to the genera *Calicurgus* and *Ferreolomorpha*, but is easily separated by having the submedian cell in the front wings distinctly shorter<sup>1</sup>) than the median. The claws, too, are also different from those in *Salius*; in the female they are cleft". From these notes it is not clear whether ASHMEAD really had a specimen from the Philippines before him, but if so, such a specimen is no longer present in the U.S. Nat. Museum collection. Upon my request for information with regard to this specimen, Mr K. V. KROMBEIN kindly wrote me as follows: "..... the only specimen I can find in the collection labelled by ASHMEAD is a wasp he determined as *Pallosoma Salius bipartitus* LEP. from Siam. None of our material of *Cyphononyx bipartitus* from the Philippines was seen by ASHMEAD as it is all from the BAKER collection ....." The Siamese specimen was sent to me and proved to belong to *peregrinus*, as that species is understood below.

As it may now be regarded as certain that ASHMEAD did not know the true *bipartitus* LEP., and that he did not have that species before him when "describing" the new genus *Pseudosalius*, it would be unsound taxonomy to continue to accept *bipartitus* as the type of that genus.

In my opinion either *Pseudosalius* should be declared an invalid name, or *peregrinus*, the species on which the generic description has apparently been based, should be regarded as the type. In the latter case *Pseudosalius* can be conveniently sunk as a synonym of *Cyphononyx* DAHLB. 1845.

It is of interest to note here that, although TURNER corrected BINGHAM's error in 1915 (Ann. Mag. Nat. Hist. (8) 16: 333) and stated that *bipartitus* and *peregrinus* belong to different genera, BANKS (Proc. Am. Ac. Arts. Sc. 69: 19, 1934) again followed BINGHAM in using the name

<sup>1</sup>) I agree with KROMBEIN (in a letter dated May 12, 1948) that this statement must be a slip of the pen and that ASHMEAD, contrasting *Pseudosalius* with *Calicurgus* and *Ferreolomorpha* (see Canad. Entom. 32: 188, 1900), meant to say: "submedian cell longer than the median cell".

*bipartitus* for a species with cleft claws. He remarks, however, that "as far as the original description goes, it (*bipartitus* LEP.) might just as well be a *Hemipepsis* or a *Monodontonyx*"<sup>1)</sup>. BANKS's "*bipartitus*" is described below as a new species of the genus *Cyphononyx*.

It is hoped, that the following descriptions of the species involved in this tangle will help to avoid further confusion.

I wish to express my sincere thanks to Mr K. V. KROMBEIN (U.S. Nat. Mus. Washington), Dr J. BEQUAERT (Mus. Comp. Zoology, Cambridge, Mass.), and Mr M. A. LIEFTINCK (Zool. Museum, Buitenzorg), who kindly allowed me to study material from their collections.

### *Leptodialepis bipartitus* (LEP.).

1845. LEPELETIER, A., Hist. Nat. Ins. Hym. 3: 406, No. 12, ♀ (*Calicurgus bipartitus*, Java).  
1914. STRAND, E., Archiv f. Naturgesch. 80 A, H. 2: 137, ♀ (*Salix (Prionemis) balianus*, Bali).  
1915. TURNER, R. E., Ann. Mag. Nat. Hist. (8) 16: 333 (*Cryptochilus bipartitus*).

**Female.** — Head: fig. 1a; eyes somewhat narrower than half the front (24: 30); vertex not raised above the tops of the eyes, ocellar area flat, posterior ocelli smaller than the anterior one, their diameter almost equal to two thirds of the distance between them. POL : OOL = 1 : 2. Front slightly concave, the median line is deeply impressed about halfway between ocelli and antennae, almost fovea-like. Clypeus produced, much wider than high, dull, its anterior margin depressed and shining. Ocular distance at vertex about equal to the length of the fourth antennal segment; antennal segments 3:4 = 13:9.

Pronotum: fig. 1b; the collar moderately convex, as seen from above evenly rounded anteriorly, scarcely depressed in the middle; posterior margin very slightly depressed; as seen from above the rounded lower tubercles (bluntly angular in similarly coloured *Cyphononyx*-species) are just visible. Lateral margins of the mesoscutum elevated. Base of scutellum with a median raised line which runs into a longitudinal impression in the middle (not visible unless the pubescence is abraded). Postscutellum strongly convex; its basal half with a median carina, the posterior slope flattened, the lateral areas with about six transverse rugae. Postnotum short, longer at the sides, dull, transversely costate, with a median groove. Propodeum as seen in profile almost regularly convex, the declivous part slightly flattened; infrastigmal tubercles well developed, stigmal grooves shallower than in *C. peregrinus*; dorsum with a shallow median groove; the surface dull, transversely rugose, the dorsum with about ten rugae which are irregular and obliterated in some places.

<sup>1)</sup> This name is erroneously used by BANKS for certain species belonging to the genus *Leptodialepis* HAUPT.

First abdominal segment: fig. 1 h, the tergite very moderately convex, as seen from above and in front funnel-shaped, the sides almost straight. Basal half of second tergite with scattered punctures.

Wings: figs. 1 d-f; fore wing: stigma small, vena postica strongly thickened; the nervulus oblique, almost its own length beyond the fork. Cubitus of hind wing interstitial or almost so.

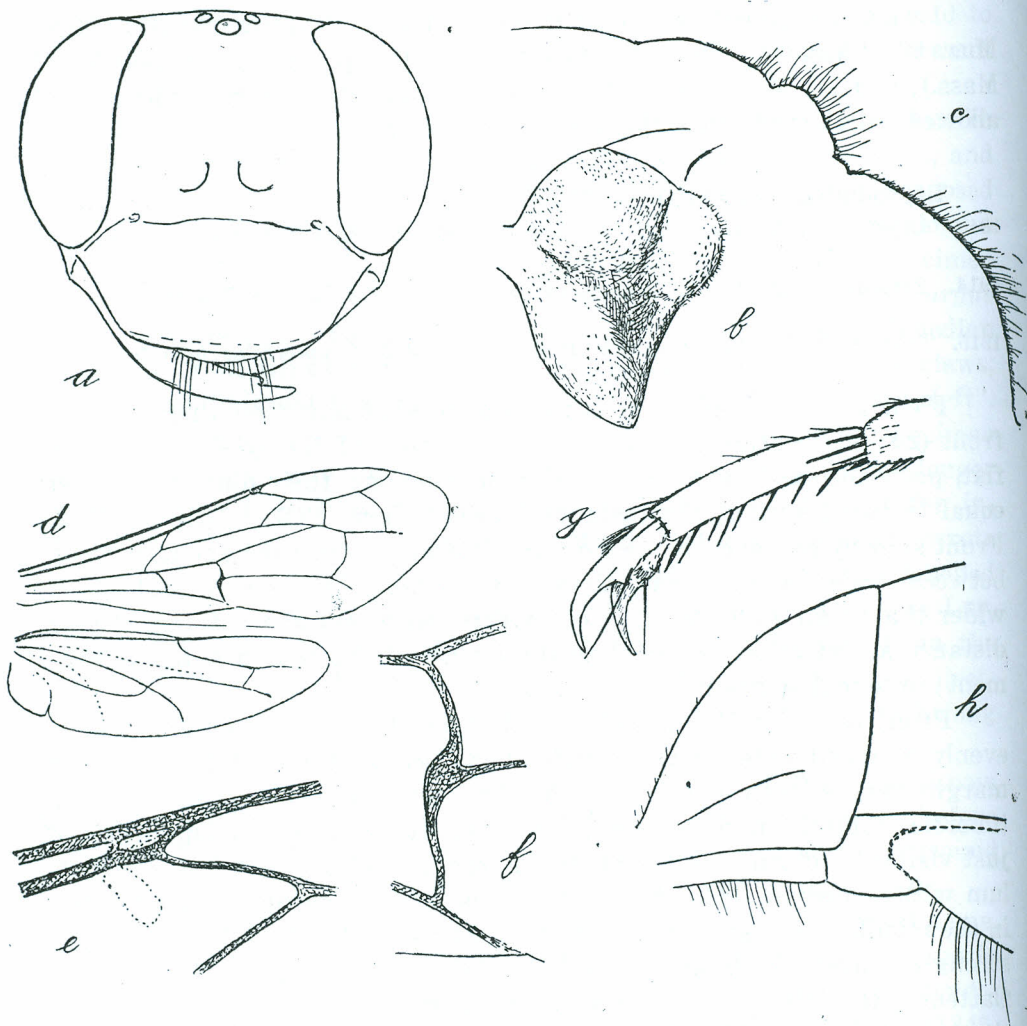


Fig. 1. *Leptodialepis bipartitus* (LEP.), ♀ (from Buitenzorg, Java); a: head; b: lateral view of pronotum; c: outline of part of thorax; d: wings; e: stigma of fore wing; f: vena postica of fore wing; g: fifth tarsal segment of hind leg; h: base of abdomen, in profile.

Hind tibiae with a dorsal row of about 20 spines, the basal 13 or 14 of which emerge from below a narrow rounded scale; at the base the spines are close together, towards the apex more widely spaced. On the inner side there is a row of 8 spines; the row of spines on the outer side

consists of  $\pm 5$  short spines, implanted on small oblique tubercles, close together near the knee, and 5-10 longer spines, widely spaced, on the posterior three fourths of the tibia; underside with some irregularly placed spines. Basal half of inner spur of hind tibiae with a dense comb of hairs. Fifth tarsal segment of hind legs (fig. 1 g) on each side with 7-8 spines. Claws long, moderately curved, with one tooth; on outer side with one strong bristle and one or two smaller ones (fig. 1 g). Claw comb ("Klauenkamm" of HAUPT) long, consisting of 10-11 bristles.

Black; the following parts flavo-ferruginous: head with antennae (occiput fuscous in the middle, last antennal segment slightly infuscated), collar and lateral tubercles of pronotum, mesoscutum, tegulae, disk of scutellum, a small spot on postscutellum, and the legs (femora and trochanters partly brownish). Sixth abdominal segment partly reddish, with brownish golden pubescence and bristles. Wings fuscous, with a violaceous lustre. Tomentum on the ferruginous parts (except on antennae) golden, on the dark parts of the thorax brownish, on the mesopleura with a golden lustre, on the abdomen greyish brown.

Length 20-26 mm, fore wing 17-23 mm.

Male. — Eyes scarcely narrower than half the front (17:19); vertex very slightly convex. POL : OOL = 3:5. Diameter of posterior ocelli slightly greater than half the distance between them. Ocular distance at vertex equal to the length of the third antennal segment, the fourth segments slightly shorter. Antennae long, flattened below, the flattened area bordered on each side by a weak carina; eighth and following segments slightly curved.

Disk of scutellum convex, with a median raised line (hidden under the tomentum), posteriorly with a median longitudinal impression; postscutellum strongly tectiform, with a sharp dorsal edge (fig. 2 a). Infrastigmal tubercles of propodeum strongly developed.

Abdomen<sup>1)</sup> with a few long hairs on the first tergite and on the sternites; tergites with scattered superficial punctures. Sixth (7th) sternite almost bare in the middle, its posterior margin scarcely emarginate (fig. 2 c); seventh (9th) sternite: fig. 2 d; genitalia: fig. 2 e, the digitus without incision on inner side.

Legs slender; inner spur of hind tibia half as long as the metatarsus; fifth tarsal segment (fig. 2 b) on each side with 5-6 spines; claws cleft, the tip of the inner tooth rounded; outer side of claw with only two bristles. Tarsal segments 2-4 of hind legs with very short pubescence, the spines much longer than the hairs.

Generally darker than the female. Head flavo-ferruginous; labrum and an ill-defined line along inner orbits yellow; vertex, occiput, the

<sup>1)</sup> The morphologically correct numbers of the abdominal sternites are given in brackets; it should be noted that the 8th sternite is not visible externally (compare: R. E. SNODGRASS, The Male Genitalia of Hymenoptera, *Smithson. Miscell. Coll.* vol. 99, No 14, p. 46, 1941).

front above the antennae (except at the sides), base and apex of mandibles, and the apical five or six antennal segments fuscous. Thorax and abdomen black; pronotal collar ferruginous, with a transverse yellow line on each side, the posterior margin narrowly testaceous; mesoscutum, tegulae and a small spot on scutellum brown, sometimes these parts more or less infuscated. Legs ferruginous, coxae and trochanters black; femora infuscated at base, fifth tarsal segment of fore and mid legs (sometimes also the fourth) fuscous, that of the hind legs infuscated at the apex. Wings as in the female.

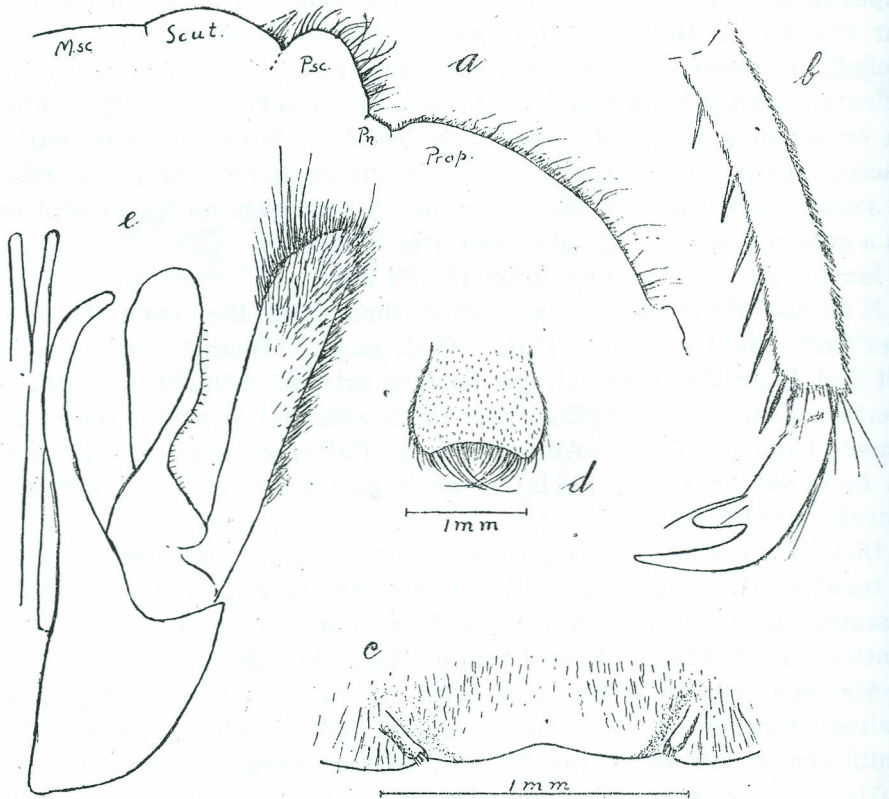


Fig. 2. *Leptodialepis bipartitus* (LEP.) ♂ (from Buitenzorg, Java); a: outline of part of thorax; b: fifth tarsal segment of hind leg; c: posterior part of sixth (7th) sternite; d: do. of seventh (9th) sternite; e: genitalia, left half.

Length 16 - 20 mm; fore wing 14 - 18 mm.

**Formosa**: 1 ♀, Hori, 9.VI.1934, L. GRESSITT (Mus. Comp. Zool. Cambr., Mass.); in this specimen the pubescence of the sixth tergite is darker than usual.

**Malaya**: 1 ♀, Kuala Lumpur, at light, 30.VI.1938; 1 ♀, Parit Buntar, Perak, 26.VIII.1931 (both in coll. H. T. PAGDEN).

**Java**: In West Java this species is apparently not rare in forest areas. Specimens of both sexes in my collection are from Tjiampea

near Buitenzorg and from various localities in the Djampang district. Dr J. G. BETREM collected this species in Central Java (Semarang, Tjandi, VIII.1939) and in East Java (Baung, XI.1934). In coll. Zool. Mus. Buitenzorg: 5 ♀, Djampang Tengah, Mt Tjisuru, 600-800 m, III., IX. and XI.1933, Mrs M. E. WALSH; 1 ♂, do, III.1937; 1 ♀ Buitenzorg, Tjiogreg, 12.V.1940, WIRA; 1 ♂, Buitenzorg, 20.III.1930, M. A. LIEFTINCK; 1 ♀, Radjamandala, 400 m, 28.V.1936, F. C. DRESCHER. In Mus. Strassbourg: 2 ♀, 1 ♂, Java, FRUHSTORFER.

Bawean I.: 3 ♀, H. FRUHSTORFER (coll.m.).

Sumatra: 2 ♂, S. Sumatra, Lampong Districts, Mt Tanggamus, Mrs M. E. WALSH, VII.—VIII.1935 (coll. m.); in Zool. Mus. Buitenzorg: 1 ♀, 3 ♂, same loc., 500 m, XII.1939, M. A. LIEFTINCK; 1 ♂, do, 400 m, XII.1934, M. A. LIEFTINCK and L. J. TOXOPEUS; 1 ♂, do, III.1940, M. A. LIEFTINCK; 1 ♂, Kotabumi, 12.VI.1940, L. BURGERMAN; 1 ♀, Djambi, Pahu, 26.X.1925, O. POSTHUMUS (Djambi-Exp.); in Mus. Comp. Zool. Cambr., Mass.: 1 ♀, Pematang Siantar, VII.1937, C. T. & B. B. BRUES.

? Bali: I have not seen the type of "*Salius balianus*" STRAND, but the description leaves little doubt that it is based on a specimen of *bipartitus* (LEP.).

Sumba: 1 ♂, East Sumba, Mao Marru, 450 m, V.1925, K. W. DAMMERMAN (Mus. Btzg.).

### *Leptodialepis tagalensis* (BANKS).

1934. BANKS, N., Proc. Amer. Ac. Arts and Sciences 69: 23, 25, ♀♂ (*Monodontonyx tagalensis*).

In general appearance very similar to *L. bipartitus* (LEP.), but both sexes are easily distinguished from that species by the very small ocelli which are sunk in the sides of a hump. POL : OOL = 3 : 5; diameter of posterior ocelli only about one third of the distance between them. The shape of the second submarginal cell is also different.

The claws of the hind legs of the male are very peculiarly shaped, their inner tooth being curved inwards (fig. 3); this character has been overlooked by BANKS.

I examined a ♀ and ♂ paratype, resp. from Mt Makiling (BAKER) and Baguio, Benguet (BAKER) kindly sent to me by Dr BEQUAERT, and 1 ♀, 1 ♂ from Mt Makiling, resp. collected by V. J. MADRID, 16.IV. 1930 and JOSÉ CAMPO, 7.IV.1931 (leg. College of Agr., Los Baños).



Fig. 3. *Leptodialepis tagalensis* (BKS.). Fifth tarsal segment of hind leg (♂).

**Cyphononyx peregrinus (SMITH).**

1875. SMITH, F., Trans. Ent. Soc. Lond. 1875: 37 (♀♂) (*Priocnemis p.*).  
 1891. CAMERON, P., Mem. Proc. Manch. Lit. Phil. Soc. (4), 4: 452 & 455 (*Salix peregrinus*) (according to the text, fig. 19 or fig. 4 should represent this species, but I think this must be fig. 14, in the center of the top of pl. III).  
 1893. BINGHAM, C. T., Jl. Bombay Nat. Hist. 8: 375, No. 20 (*Salix p.*).  
 1897. BINGHAM, C. T., Fauna of Br. India, Hym. 1: 137, No. 270 (*Salix bipartitus*, locality records partly doubtful; the figure on pl. II is probably not this species).  
 1905. CAMERON, P., Ann. Mag. Nat. Hist. (7) 15: 475, ♂ (*Salix saturnalis*, Khasia).  
 1915. TURNER, R. E., Ann. Mag. Nat. Hist. (8) 16: 333 (*Cyphononyx p.*).

As the existing descriptions are inadequate, a redescription is given below.

**F e m a l e.** — Eyes slightly narrower than half the front (19:23); inner orbits feebly curved, slightly converging towards the vertex. Clypeus scarcely concave anteriorly, its anterior margin narrowly depressed, somewhat shining. Diameter of posterior ocelli equal to half the distance between them, the space between the ocelli almost flat, POL : OOL = 10 : 13.5. Vertex only slightly raised above the level of the tops of the eyes (fig. 4a and 4b). The distance between the eyes on the vertex is equal to the length of the third antennal segment.

Pronotal collar strongly swollen, roundly projecting laterally, in the middle slightly concave as seen from above and behind, the posterior margin slightly depressed, narrow at the sides and slightly wider in the middle; the lower tubercles are bluntly angular and just visible when viewed from above; behind them the sides are slightly converging. Sides of mesoscutum raised. Median area of scutellum moderately convex, without any trace of a median carina. Postscutellum strongly raised in the middle, bluntly carinate, as seen in profile convex (fig. 4c), but not projecting above the level of the scutellum. Mesopleura dull, their lower half finely, irregularly, striate.

Propodeum of about the same shape as in the next species, but the transverse rugae more regular and more distinct, particularly at the sides.

First abdominal segment rather high in relation to its length (fig. 4d), the tergite not flattened or depressed posteriorly. Second tergite with scattered punctures, the punctures sparser and smaller on the posterior half.

Wings: figs. 4f-h; fore wing: stigma moderately large, vena postica not thickened, nervulus about its own length beyond the fork; cubitus in hind wing interstitial or very slightly beyond the transverse anal vein.

Posterior tibiae with a row of about 16 scales, each of which overhangs a short spine; towards the apex the scales are reduced in size, and the posterior three or four are almost obsolete; on the outer side the row of scales is flanked by a row of 10 - 12 spines. Underside of fifth tarsal segment of hind legs with 5 spines on each side; claws bifid,



the inner tooth truncate; outer side of claws with four divergent bristles (fig. 4 c).

Black, with brownish black pubescence; the following parts ferruginous with brownish golden tomentum and pubescence: head, incl. the antennae (apical third of mandibles and a line on the vertex across the ocelli brownish black), pronotal collar (sometimes also the posterior tubercles), mesoscutum (often blackish in front and with a black longitudinal stripe on each side), tegulae, disk of scutellum, and the legs beyond the

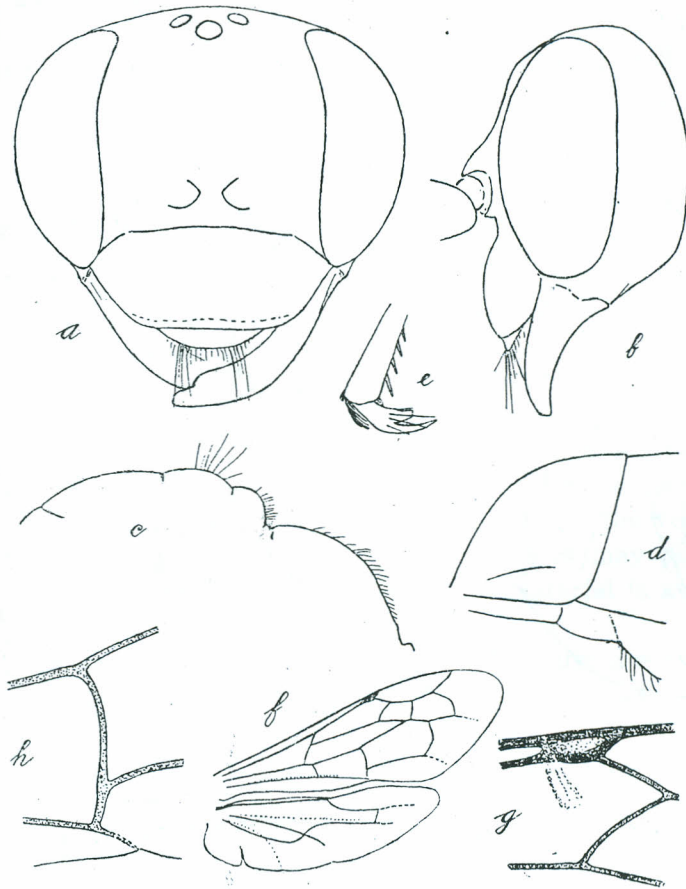


Fig. 4. *Cyphononyx peregrinus* (SM.) ♂ (from Kao Luong, Siam); a and b: head, in front and in profile; c: outline of part of thorax; d: base of abdomen, in profile; e: fifth tarsal segment of hind leg; f: wings; g: stigma of fore wing; h: vena postica of fore wing.

basal third or fourth of the femora. Fifth tarsal segment of hind legs, sometimes also the fourth, fuscous. Pubescence and bristles of sixth tergite brownish golden. Wings fuscous with violet reflections.

Length 16 - 20 mm, fore wing 14 - 17 mm.

Male. — Inner orbits more strongly curved. Diameter of posterior ocelli slightly less than half the distance between them. POL : OOL =

7:10. Distance between eyes at vertex longer than the third antennal segment (32:27). Pronotal collar even more strongly swollen than in the female. Lower anterior angles of pronotum angularly projecting. Post-scutellum strongly swollen, hump-like (fig. 5 a). Tarsi 2-4 of hind legs somewhat compressed, their underside with a dense comb of hairs, beyond which the spines do not protrude (fig. 5 e); the metatarsus has a similar comb at base and apex. Sixth (7th) and seventh (9th) ventral segments: figs. 5b and 5c. Genitalia: fig. 5d; digitus roundly emarginate on inner side; parameres with dense pilosity and 5-6 long curved hairs at apex (compare with the figure of the African *C. croceicornis* ER. in ARNOLD: Psamm. of Ethiop. Region, Ann. Transvaal Mus., vol. 14, 1932, p. 301).

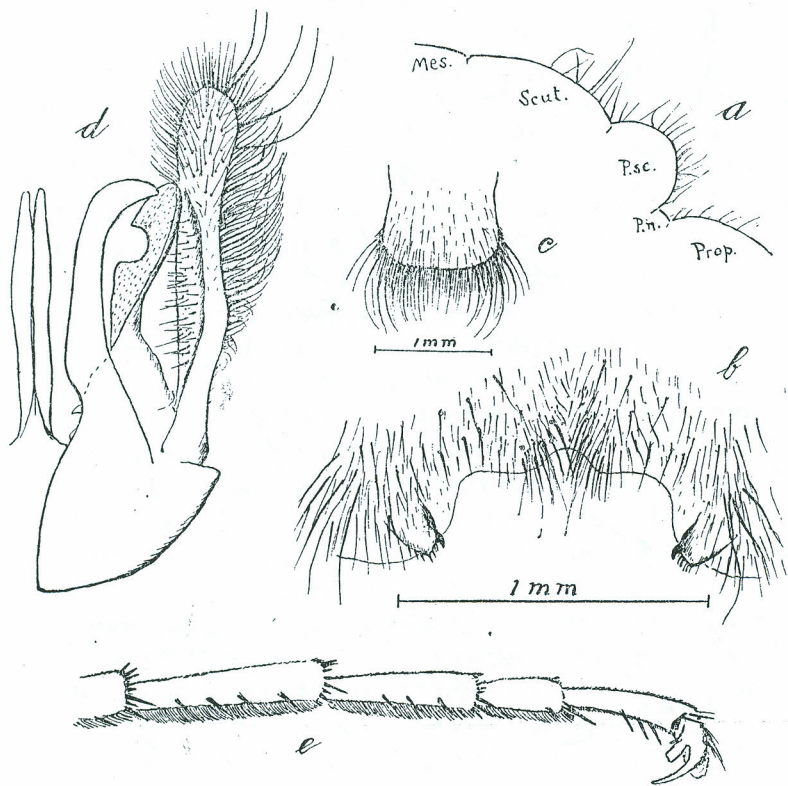


Fig. 5. *Cyphononyx peregrinus* (SM.) ♂ (from Singora, Siam); a: outline of part of thorax; b: sixth (7th) sternite; c: seventh (9th) sternite; d: genitalia, left half; e: 2nd and following tarsal segments of hind leg.

Head more extensively black than in the female: front black, inner orbits ferruginous yellow, occiput partly blackish. Mesoscutum often entirely black; scutellum often brownish; femora more extensively black, tarsi brown or blackish, with only one or more of the basal segments ferruginous. Distal 5-7 antennal segments more or less fuscous.

The size of the ♂ appears to be very variable; an excessively large specimen is 19 mm long, some very small ones only 11-12 mm. In the large specimens the postscutellum is more strongly projecting than in the small ones.

**China**: 1 ♀, Paak Shui Kong, 20-28. X., C. W. HOWARD; 1 ♀, 1 ♂ Hainan, Kachek, 22.VIII., S. F. LIGHT; 1 ♀ Canton, 10.-20.VI, C. W. HOWARD; 1 ♂ Yun Hsien, IV.1942, W. L. JELLISON (U.S. Nat. Mus.); 2 ♀, 2 ♂ Hainan, V.VIII.1935, L. GRESSITT; 1 ♂, Kwangsi, Wuchow, 1933, LIU; 1 ♂ Kiangsi Pr.-S., Tai Au Hong, S., 7.VII.1936 (Mus. Comp. Zool. Cambr. Mass.).

**Siam**: 1 ♀, Mae Suya Valley, I.1933, H. M. SMITH; 3 ♀, Trong, Dr W. L. ABBOTT; 1 ♀ Kao Luong, 14.VII.1928, HUGH SMITH; 3 ♂ Singora, VI.1929, H. M. SMITH (U.S. Nat. Mus.).

**Assam**: 1 ♀, 1 ♂, Chabua, 29.X.1943, D. E. HARDY; 1 ♀ Doom Dooma, 29.V.1943, D. E. HARDY; 2 ♂ three miles N.E. of Digboi, 17.X. 1943, D. E. HARDY (U.S. Nat. Mus.).

**Indo-China**: 2 ♀ Annam-Cana, Prov. Phanrang, 18.-22.VIII. 1932, M. POILANE; 1 ♀ Laonam & Blao, Prov. Haut Donai, 30.V.-7.VI.1933, M. POILANE (U.S. Nat. Mus.).

**Malaya**: 1 ♀, Kedah, Jitra, 22.IV.1936 (coll. H. T. PAGDEN).

**Java**: 1 ♀ South Java, Penandjung Bay, Tjimerah, VII.1936, M. A. LIEFTINCK (coll. m.).— This specimen appears to differ in a few respects from the continental specimens. The distance between the posterior ocelli is  $1\frac{1}{2}$  times their diameter; POL : OOL = 7 : 13. On the vertex only the space between the ocelli is dark. The Javan form may perhaps be regarded as a separate subspecies, but until more material is available, I prefer not to name it.

**Note**.— In the collection of the U.S. Nat. Museum are two mâles, resp. from China (Suifu to Hongya, VI.1929, D. C. GRAHAM) and from Formosa (Hokuto, 20.IX.1927, T. R. GARDNER) which appear to differ from *peregrinus* only in that the wings are yellowish brown instead of fuscous. They are perhaps identical with *C. peregrinus* ab. *disjunctus* TURNER (Ann. Mag. Nat. Hist. (9) 5: 97), although according to TURNER *disjunctus* is the prevalent form in Western India.

A male from Palawan, P. Princesa, BAKER (U.S. Nat. Mus., no 3788) is probably also a *C. peregrinus*, but examination of more material is desirable to establish without doubt the occurrence of this species in the Philippine Islands.

### **Cyphononyx discrepans, n.sp.**

**Female**.— Front wide, convex, scarcely flattened above the antennal sockets; eyes much narrower than half the front (15:25), their inner margin slightly emarginate. Clypeus shallowly emarginate anteriorly, its anterior margin finely sculptured, dull. Ocelli very small, the area

between and behind them raised; diameter of the posterior ocelli less than one fourth of the distance between them. POL : OOL = 10 : 13. Vertex strongly raised above the level of the tops of the eyes (figs. 6a and 6b).

Pronotal collar distinctly swollen, the shoulders roundly projecting, the median impression shallow, the posterior margin slightly depressed; the lower tubercles blunt and scarcely visible as the thorax is viewed from above. Lateral margins of mesoscutum raised. Median part of scutellum slightly convex, with a faint median raised line. Postscutellum moderately convex lengthwise, and also transversely, not hump-like projecting and not carinate; posterior half with a shallow median impression. Postnotum short, somewhat below the level of postscutellum and propodeum, transversely striate, with a deep shining triangular impression in the middle.

Propodeum rather evenly convex lengthwise, dull, microscopically granulated and finely transversely rugose; the rugae very superficial, more distinct towards the sides, but even here less pronounced than in *C. peregrinus*; interspaces wider than the rugae, with some very superficial, scattered, punctures. Dorsum with a shallow median furrow, declivity very shallowly excavated. Infrastigmal tubercles moderately developed, rounded; stigmal furrows distinct. Lateral angles of the posterior rim bluntly rounded.

First abdominal segment (fig. 6e) longer in relation to its height than in *C. peregrinus*; the tergite with a few shallow punctures, its posterior part very shallowly transversely depressed. Second segment, as seen from above, slightly wider than long, with scattered punctures which are largest on the basal half; posterior margin slightly depressed.

Fore wing: fig. 6d; anterior part of vena postica about three times the posterior part; this vein only slightly thickened at the origin of the parallel vein. Nervulus about its own length beyond the fork. Cubitus in hind wing interstitial.

Hind tibiae with a row of about 14 obliquely placed scales, each one of which overhangs a short spine; there is only a faint indication of a second row of scales near the knee. Claws of all tarsi cleft, the inner tooth truncate.

Black; head and antennae dull brownish red; the space between the ocelli black; pronotal collar, mesoscutum, tegulae, disk of scutellum and the legs from about the middle of the femora, ferruginous. Wings fuscous, with purplish reflections. — The brightly coloured parts of head and thorax with fine brownish golden tomentum; sixth abdominal segment with golden pubescence and bristles; propodeum almost bare.

Length 16 - 18 mm, fore wing 14 - 15 mm.

Male. — As in the female, the vertex is strongly raised above the tops of the eyes (fig. 6c); the ocelli are small, diameter of the posterior

ones only about one third of the distance between them; POL : OOL = 2:3; ocellar area slightly raised. Anterior margin of clypeus very slightly concave. Lower anterior tubercles of pronotum rounded, not projecting as the thorax is seen from above.

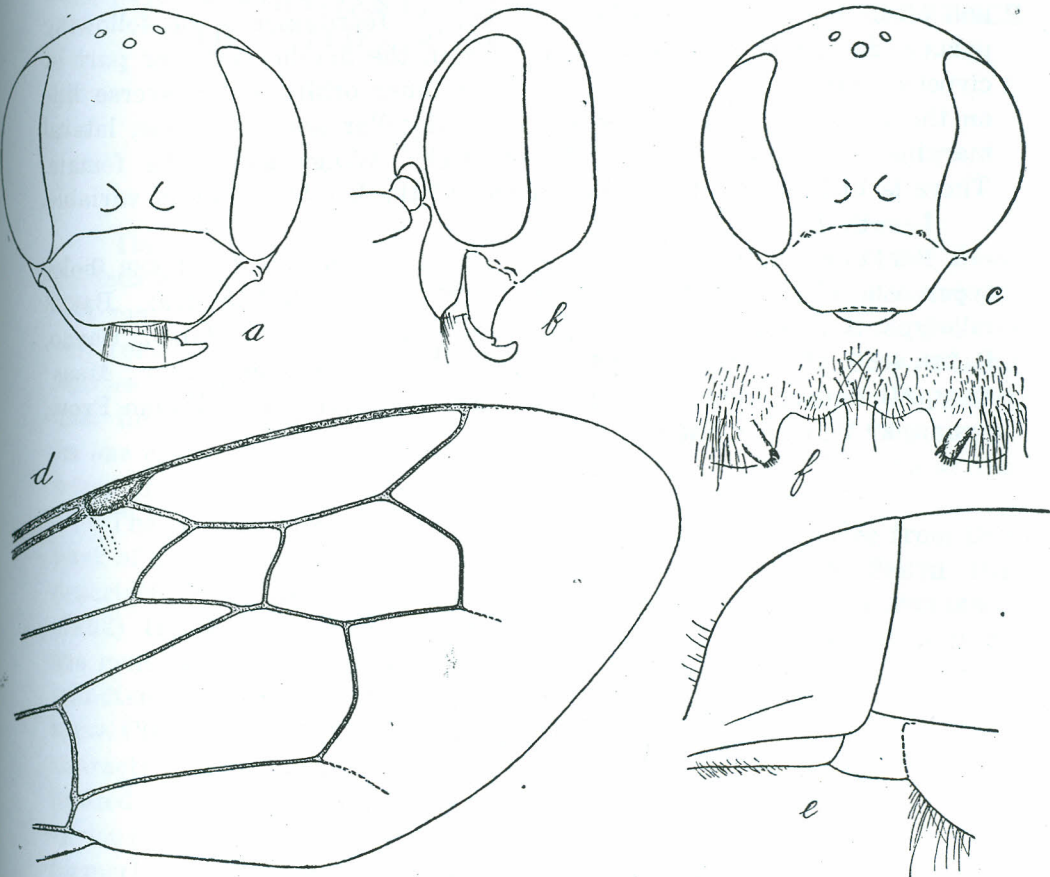


Fig. 6. *Cyphononyx discrepans* n. sp., ♀ (holotype) and ♂ (allotype); a and b: head of ♀, in front and in profile; c: head of ♂; d: part of fore wing of ♀; e: base of abdomen of ♀; f: sixth (7th) sternite of ♂.

Median area of scutellum rather narrow, convex anteriorly, posterior part more flattened, not carinate; the postscutellum convex, cushion-shaped, its posterior half with a small median impression. Propodeum lengthwise convex, slightly shiny, microscopically reticulately rugose, with scattered fine punctures, at most with traces of a transverse striation at the sides; stigmal groove shallow, infrastigmal tubercles rather broad and low, not much projecting.

Second abdominal segment rather long, its posterior margin depressed. Abdominal segments rather densely covered with fairly long erect black hairs. Sixth sternite: fig. 6f. Genitalia as in *C. peregrinus*, but the curved hairs on the apex of the parameres (outer arms of the stipes) are lacking.

Tarsal segments 1 - 4 of hind legs with a comb of fine short hairs, these hairs directed backwards and distinctly shorter than the spines. Inner spur of hind tibiae slightly over two fifths of the length of the basitarsus. Submarginal cells of fore wing higher than in the ♀.

Black; antennae (brownish at apex), tips of femora, part of tibiae and often one or two basal tarsal segments ferruginous; the following parts darker, reddish brown: mandibles in the middle, anterior part of clypeus, labrum, an irregular line along inner orbits, a transverse line on the vertex (behind the ocelli), pronotal collar above, tegulae, lateral margins of mesoscutum (sometimes black). Wings as in the female. There is little doubt that the extension of the bright colour is variable.

Length 12 - 15 mm.

Philippine Islands: 1 ♀, Mt Banahao, Luzon, BAKER (holotype, coll. U.S. Nat. Museum); 1 ♂, Mindanao, Kolambugar, BAKER (allotype, No. 18000, coll. U.S.N.M.); paratypes: 2 ♂, Mindanao, Davao, BAKER (coll. U.S.N.M. and coll. m.); in Mus. Comp. Zool. Cambr., Mass: 1 ♂, Mindanao, Zamboanga (BAKER) and 1 ♂, Mindanao, Davao Prov., Calian, 29.V., C. S. CLAGG.