

ON SOME CRABRONIDS FROM FORMOSA

(Hymenoptera, Sphecidae)

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Recently I had a good fortune to study the specimens of Crabroninae from Formosa preserved at the Entomological Institute, Hokkaido University. The collection was not large but included some distributionally interesting species and, therefore, was recorded herewith. In regard to the present study I am much indebted to Dr. C. WATANABE of that Institute to whom, as well as to the collectors of the specimens, I express here my warmest thanks.

1. *Dasyproctus ceylonicus* SAUSSURE, 1867

Dasyproctus ceylonicus SAUSSURE, Reise der Fregatte Novara. Zool. Hymen., Wien, p. 85, 1867;—LECLERCQ, Monogr. syst. phylog. zoogeogr. Hym. Crabro., p. 262, 1954; Bull. Ann. Soc. R. Ent. Belg., XCII, p. 162, 1956; Bull. Soc. R. Sci. Liège, 26, n. 1, p. 55, 1957; Expl. Parc Nat. Upemba, Hym. Sphec., II, Crabr., p. 46, 1958.

Crabro orientalis CAMERON, Hym. Orient. Mem. Proc. Manchester Lit. Philos. Soc., (4) 3, p. 272;—BINGHAM, Faun. Brit. Ind., Hym., I, p. 324, 1897.

Dasyproctus orientalis TURNER, Ann. Mag. Nat. Hist., (8) X, p. 376, 1912;—LECLERCQ, Bull. Inst. R. Sci. nat. Belg., XXVI, 15, p. 11, 1950; 1954, loc. cit., p. 262.

Dasyproctus philippinensis ASHMEAD, Proc. U. S. Nat. Mus., 28, p. 129, 1904;—LECLERCQ, 1954, loc. cit., p. 258.

(As for other synonyms, *impetuosus* CAM., 1901; *revelatus* CAM., 1898 (?); *infantulus* KOHL, 1898; *funestus* TURNER, 1917; see LECLERCQ, loc. cit., p. 162).

Specimens examined: 1♀, Formosa, 18. VII. ?, S. MATSUMURA leg.; 1♀, Taihoku (Suigench), 8. VII. 1926, S. ISSHIKI leg.; 1♀, Koshen, 5. X. 1926, J. SONAN leg.; 1♂, Tainan (Shinqua), data undescribed, S. TAKANO leg.

Distribution: India, Thai, Malay, Sumatra, Java, Borneo, Celebes, the Philippines and Formosa (Taihorinsho—LECLERCQ, 1956, from SAUTER's collection).

2. *Dasyproctus buddha* (CAMERON, 1889)

Rhopalum buddha CAMERON, Mem. Proc. Manchester Lit. Philos. Soc., (4) p. 18.

Dasyproctus buddha TURNER, 1912, loc. cit., p. 376;—LECLERCQ, 1950, loc. cit., p. 11; 1954, loc. cit., p. 258; 1956, loc. cit., p. 147; 1957, loc. cit., p. 52; 1958, loc. cit., p. 40, 41 et 60.

Crabro brookii BINGHAM, J. Linn. Soc. London, Zool., 25, p. 442, 1896; 1897, loc. cit., p. 323.

(As for other synonyms, *taprobane* CAM., 1898; *idrieus* CAM., 1903 (?); *musaeus* CAM., 1903 (?); *testaceipalpis* CAM., see LECLERCQ, 1956, loc. cit., p. 147).

A single specimen examined: 1♀, Kizan, 7, IV. 1932, collector unknown.

Distribution: India, the Malay Peninsula and the Philippines. New to the fauna of Formosa.

Remarks. The two Formosan species of

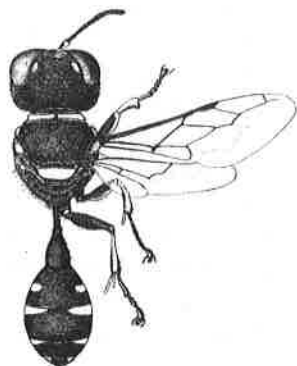
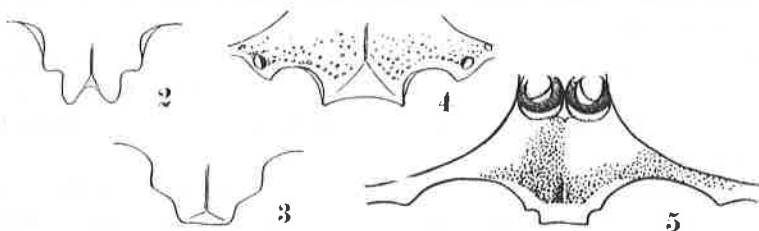


Fig. 1.

Dasyproctus buddha
CAMERON, ♀.



Figs. 2-5. Clypeus. 2, *Dasyproctus ceylonicus* SAUS., ♀; 3, *ibid.*, ♂; 4, *D. buddha* CAM., ♀; 5, *Ectemnius palitans* BINGH., ♀.

Dasyproctus above listed can easily be separated from each other by the following table:

1. Anterior pronotal carina directly continued laterally to that of humeral angle, lateral surface of pronotum almost without striae,

clypeus (♀): Fig. 2¹, (♂): Fig. 3, usually 2nd tergite of abdomen without maculae *ceylonicus* SAUSSURE

- Anterior pronotal carina not continued laterally to humeral angle, but turning ventrad to lateral surface of pronotum, the area strongly transversely striate, clypeus (♀): Fig. 4² 2nd tergite of abdomen always with lateral yellow maculae *buddha* CAMERON

3. *Ectemnius (Cameronitus) palitans* (BINGHAM, 1896)

Crabro palitans BINGHAM, Proc. Zool. Soc. London, p. 446, 1896; 1897, loc. cit., p. 329.

Crabro (Solenius) palitans TURNER, 1912, loc. cit., p. 377.

Ectemnius (Clytochrysus) palitans LECLERCQ, Bull. Ann. Soc. Ent. Belg., LXXXVI, p. 195, 1950.

Ectemnius (Cameronitus) palitans LECLERCQ, 1954, loc. cit., p. 284.

Specimen examined: 1♀, Taihoku, 6. V. 1931, S. OKAGAKI leg.

Distribution: India (N.-W. regions, Kumaun and Ceylon). This is the first record of the species from Eastern Asia.

Remarks. The single specimen observed bears distinctly the characters of the subgenus *Cameronitus*, excepting that the first tergite of abdomen is fairly strongly, moderately grossly and rather sparsely punctured (intervals are larger than the punctures). In colour it agrees fairly well with the description of BINGHAM (1897) and in striation of the propodeum it is very similar to *Ectemnius (Hypocrabro) continuus* FABRICIUS.

4. *Ectemnius (Hypocrabro) schlettereri sakaguchii* (MATSUMURA et UCHIDA, 1927)

Crabro sakaguchii MATS. et UCHIDA, Ins. Mats., I, p. 38, 1926.

Ectemnius (Hypocrabro) sakaguchii LECLERCQ, 1954, loc. cit., p. 270.

Ectemnius (Hypocrabro) schlettereri sakaguchii TSUNEKI, Akitu, VIII, 1, 1959.

♂ (hitherto undescribed). Length 9.5 mm. Similarly to the female, representing the brightest colour form of the nominate race. Yellow: Mandibles in front before middle, scapes wholly and pedicels beneath of antennae, pronotum, humeral angles, a large macula on upper portion

- 1) In the form of the clypeus the Formosan specimens differ somewhat from the typical race, as was pointed out by LECLERCQ, 1956. The lateral tooth on each side of the medial bidentate protuberance is more marked.
- 2) This is also somewhat different from the figure by LECLERCQ. The lateral emarginations are broadly rounded and the lateral teeth are smaller.

of epicnemial, a broad band and auxillae of scutellum, postscutellum, a lateral large transverse macula and a narrow transversely elongate macula respectively on each side of 2nd and 3rd tergites of abdomen, a broad band on 4th and 5th tergites, apical portion on outer surfaces of front and mid legs broadly and all tibiae and metatarsi externally. General structure and sculpture more similar to those of the nominate race than in female, but the anterior protuberance of clypeus somewhat broader than in the typical race just as in female.

Specimen: 1♂ (Allotype), Takao, 28. VIII. 1927, J. SONAN and K. SHIBATA leg. (In the collection of Ent. Inst. Hokkaido Univ.).