

Bees of the genera *Hoplonomia* and *Crociaspidia* (Halictidae, Nomiinae) of India, with key to species

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ABSTRACT: The nomiine bees of the genera *Hoplonomia* Ashmead and *Crociaspidia* Ashmead occurring in India are reviewed. Specimens were collected from Kerala. Biology and distribution of five species are summarized. An identification key to *Hoplonomia* and *Crociaspidia* of India is provided.

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KEY WORDS: Hymenoptera, Apoidea, taxonomy, distribution

INTRODUCTION

Hoplonomia Ashmead, 1904 is mainly a south Asian genus occurring from Afghanistan to Australia. It is not known from Africa (Michener, 2007). This genus is recognized by the banded abdomen and basally fused lamelliform projections on the metanotum. *Hoplonomia* is considered intermediate between *Acunomia* and *Crociaspidia*. *Hoplonomia* is represented by 16 species worldwide. Five species viz, *Hoplonomia elliotii* (Smith, 1875), *H. kulliensis* (Tomar & Tomar, 2005), *H. westwoodi* (Gribodo, 1894), *H. callichora* (Cockerell, 1911) and *H. incerta* (Gribodo, 1894) are known from India. *Crociaspidia* Ashmead, 1899 is characterized by the presence of double projection of scutellum and metanotum. The body is more robust than in most nomiine genera and is the only group of Nomiinae in which the coloured tergal bands are sometimes broken medially and these broken bands resemble *Thyreus*. Currently a single species is

known from India. Eleven species were revised by Pauly (1990). In this paper four species of *Hoplonomia* viz., *H. elliotii*, *H. incerta*, *H. westwoodi*, and *H. callichora* and one species of *Crociaspidia* viz., *C. buddha* (Westwood, 1875) are diagnosed. *Hoplonomia kulliensis* probably a synonym of a species already described and being a doubtful species is not included here for diagnosis Pauly (2009).

MATERIALS AND METHODS

Literature was surveyed for published reports of *Hoplonomia* in India (Bingham, 1897; Pauly, 2009; Saini and Rathore, 2012; Pannure and Belvadi, 2017). Data regarding specimens from the six major collections for India viz., American museum of natural history (AMNH), Regional Museum of Natural History (RMNH), United States National Museum (USNM), Smithsonian Institution, Washington, Statens Museum for Kunst (SMUK) Denmark, Natural History Museum (NHMUK),

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Institut royal des Sciences naturelles de Belgium (IRSNB); and Zoological Museum, University of Copenhagen (ZMUC) were obtained. Materials were also collected from the state of Kerala, India using sweep nets. These materials were examined and preserved in the Department of Zoology, Government College Kodanchery, Kozhikode, Kerala, India (DZGCK). Distribution maps were prepared using all localities from India from where *Hoplonomia* and *Crocisaspidia* have been collected and was prepared using SimpleMapp (Shorthouse, 2010).

RESULTS AND DISCUSSION

Systematics

Halictidae, Nomiinae

Genus *Hoplonomia* Ashmead

Description: Length 6.5 to 11.5mm. Metanotum with two broad, basally fused lamelliform projections as in *Crocisaspidia*. Scutellum lacks projections or has only small ones in some males. Body is generally smaller and slender when compared to *Crocisaspidia*. Intermediate tibia with strong sub apical teeth. Propodeum sub vertical, defined, triangular propodeal area and tegulae normal. Clypeus in the form of plateau, flanked on the front with a median carina more or less marked.

Presence of two lamelliform projections on the metanotum is a characteristic feature which distinguishes *Hoplonomia* from other Nomiinae. This genus is allied to *Curvinomia* Michener on account of the abdomen being banded. Post scutellum in both sexes is armed with two straight spines. Scutellum provided with median depression and the hind angles ending in a small tubercle.

Distribution: *Hoplonomia* is known from Japan, China, India, South East Asia, Philippines, Indonesia, New Guinea, Bismarck, Solomon Islands, Australia, south to southern Queensland and Madagascar. It is not known from Africa. In India it is known from Maharashtra, Himachal Pradesh, Kerala, Karnataka, West Bengal, Andhra Pradesh, Pondicherry, Tamil Nadu and Rajasthan.

1. *Hoplonomia callichlora* (Cockerell, 1911)

Nomia callichlora Cockerell, 1911: 219, ♀. Holotype ♀: "N.W. India" [Pakistan], Karachi, leg. E. Comber, NHMUK (examined).

Distribution: North India (Fig. 26)

Materials Examined: Rajasthan, Abu, 24.64N; 72.77E, 1 ♀, leg. C.G. Nurse (NHMUK).

Diagnosis: *Length*, 9mm. Black, abdomen with broad bright green bands (the first three flushed with vermillion) on the first four segments; post scutellum with two strong black teeth; mandibles dark red in middle; flagellum ferruginous beneath; hind legs almost entirely amber colored; middle of face and clypeus with a delicate keel; tergite band covers the entire apical depression. *Male*. Femur less developed. *Female*. scutum with more patchy punctuation.

Shows much resemblance to *Hoplonomia elliotii* Smith, it is however readily separated as follows. Rather smaller, face narrower, covered with white hair; mesothorax smaller, more shining, with smaller punctures, a band of grayish-white hair running along lateral and hind margins, and the disc with much pale hair, hair of outer side of middle tibiae entirely white, green abdominal bands twice as broad.

2. *Hoplonomia elliotii* Smith, 1875

Nomia elliotii Smith, 1853:89, ♂, India Nomen nudum.

Nomia elliotii Smith, 1875:44, pl. 1, fig. 7, ♀ ♂

Types: Madras, Barrackpore and Nischindipore. (not examined)

=? *Nomia simplicipes* Friese 1897: 73, ♂, nec. ♀ Lectotype ♂: China, Kaulun near Hong Kong designated by Cockerell, 1919: 3 (not examined) Syn.of Pauly (2009)

Distribution: The species is known from India to Indochina and Southern China. In India it has been reported from Maharashtra, Karnataka, Kerala, Tamil Nadu, West Bengal, Goa and Assam (Fig. 25)

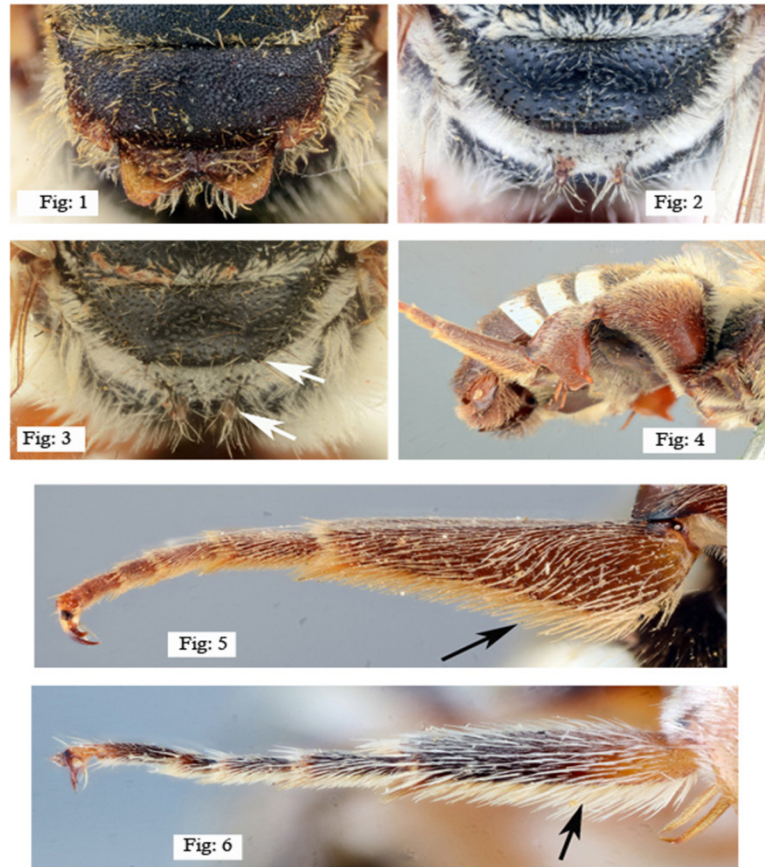


Fig. 1 *Crocisaspida buddha*, male, scutellum and metanotum, Fig. 2 *Hoplonomia westwoodi*, male, scutellum and metanotum, Fig. 3 *Hoplonomia westwoodi*, scutellum and metanotum, Fig. 4 Hind leg of *Crocisaspida buddha*, Fig. 5 Enlarged metabasitarsus of *Crocisaspida*, Fig. 6 Narrow metabasitarsus of *Hoplonomia*

Materials Examined: Kerala, Malappuram, Calicut University, botanical garden, 11.13N; 75.89E, 27. ix.1986, 2 ♂, leg. E.E. Grissell (USNM); Trivandrum, Ponmudi Range, 8.48N; 76.94E, 3000ft, v.1972, 2 ♀, leg. T.R.S. Nathan (SMUK); Palakkad, Walayar Forest, 10.84N; 76.84E, 700ft, x.1959, 4 ♂, leg. P.S. Nathan (RMNH); Palakkad, Walayar Forest, 10.84N; 76.84E, 1000 ft, ix.1952, 1 ♀, leg. P.S. Nathan (IRSNB); Kasaragod, Neeleswaram, 12.25N; 75.12E, 24.vi.2018, 1 ♀, leg. Asha (DZGCK); Wayanad, Pulpally, 11.79N 76.16E, 13.v.2018, 1 ♀, leg. Manjusha (DZGCK); Kasargod, Periyar, 12.40N; 75.09E, 10.i.2015, 1 ♀, leg. Sangeetha (DZGCK); Kozhikode, Balussery, 11.45N; 75.82E, 23. v. 2018, 1 ♀ leg. Adersh (DZGCK); Kannur railway, 11.87N; 75.36E, 6. vii. 2014, 1 ♀, leg. Asha (DZGCK); Kasaragod,

Padannakkad, 12.26N; 75.36E, 2. v. 2018, 1 ♀ leg. Adarsh (DZGCK); Kannur, Madayipara, 38m, 12.16N; 75.33E, 1 ♂, 13. viii. 2015, coll. Prashantha, C, 1 ♀, 13. viii. 2015, coll. Pradeepa, S.D.

Maharashtra, Salsette Island, 19.11N 72.89E, 1910, 2 ♀, (NHMUK).

Tamil Nadu, Coimbatore, 11.00N 76.96E, xi.1958, 1 ♀ leg. P.S. Nathan (RMNH); Annamalai Hills, 11.11N 77.335E Cinchona, 3500ft, v.1960, 1 ♀, leg. P.S. Nathan (RMNH); Nilgiris Hills, Devala, 11.47N; 76.38E, 3200 ft, v.1961, 1 ♀ leg. P.S. Nathan (AMNH).

West Bengal, Calcutta, 22.57N; 88.36E 1 ♂, 1 ♀ (IRSNB).



Fig. 7



Fig. 8



Fig. 9



Fig. 10



Fig. 11



Fig. 12

Fig. 7 *Hoplonomia incerta*, male, metasoma, Fig. 8 *Hoplonomia elliotii*, male, metasoma, Fig. 9 *Hoplonomia westwoodi*, male, metasoma, Fig. 10 *Hoplonomia elliotii*, male, hind leg, Fig. 11 *Hoplonomia westwoodi*, male, hind leg, Fig. 12 *Crocispidia buddha*, female, scutellum and metanotum

Diagnosis: Female. Colouration. Head and mesosoma black, bright emerald green transverse fasciae in the apical margin of the basal four abdominal segments, post scutellar spine dark chestnut brown. **Sculpture.** Head and thorax closely and finely punctured, punctures more sparsely and coarsely on scutellum, smooth and opaque abdomen, punctures on the base of the segments, clypeus flat with carina in the mid line, scutellum with deep notch, presence of spines in the middle of post scutellum posteriorly, fine punctures in the space at the base of the median segment, transverse impressed lines across the middle of the basal four abdominal segments. **Pubescence-** white somewhat griseous thin pubescence, legs with pale glittering pubescence.

Male. Tubercles at the lateral angles of the scutellum and medial spines on the post scutellum

more prominent, posterior femur greatly swollen, tibia flattened, the apex on the inner side produced into blunt testaceous process.

3. *Hoplonomia incerta* (Gribodo, 1894)

Nomia incerta Gribodo 1894: 129, ♂, ♀, Lectotype ♀: Java, collection Gribodo, MCSN (examine), designated by Pauly, 2009

=*Nomia punctata* Westwood 1875: 213, ♂, ♀, nec Smith 1858. Type: China, BMNH (nonexamine). Syn. of Pauly (2009)

=*Nomia pilosella* Cameron 1904: 211, ♂ Holotype ♂: India, Khasia Hills, OUMNH (examined) Syn of Pauly (2009)

=*Nomia maturans* Cockerell 1912: 10. Holotype: Formose, Takao, 10. XI. 1907(not examined, sec description), Syn. of Pauly (2009)



Fig. 13



Fig. 14



Fig. 15



Fig. 16



Fig. 17



Fig. 18

Fig. 13 *Hoplonomia elliotii*, female, scutellum and metanotum, Fig. 14 *H. incerta*, female, metasoma, Fig. 15 *H. callichlora*, female, metasoma, Fig. 16 *H. elliotii*, female, metasoma, Fig. 17 *H. westwoodi*, female, metasoma, Fig. 18 *H. elliotii*, female, metasoma

Distribution: Nepal, India, China, Korea, Peninsula, Japan, Taiwan, Indonesia. In India it has been reported from Arunachal Pradesh and Meghalaya (Fig. 26)

Materials Examined: Sikkim, 27.60N; 88.45E, 1: ♂ leg. F.A. Noller (UZMK).

Diagnosis: Metanotum with double projection; Integumentary bands blue coloured, opalescent, band absent on the first abdominal segment; Female has the mesothorax with punctures of unequal size and the lobes of the post scutellum with obtuse process.

4. *Hoplonomia westwoodi* Gribido, 1894

Nomia simillima Smith 1875: 44, pl. II, fig. 4, ♂ = *Nomia carinata* Smith 1875: 57, ♀. Holotype ♀: Ceylon, NHMUK. **Syn. Nov.**

=*Nomia westwoodi* Gribodo 1894: 128, nom. nov. pour *Nomia simillima* SMITH 1875, nec 1863

=*Nomia erythrogaster* Cameron 1898: 61, pl. 4, fig. 10, ♂. Lectotype: India, Poona, OUMNH, designated by Baker 1993: 258

Distribution: This species is found in India, Afghanistan, Pakistan and Srilanka. In India it has been reported from Maharashtra, Andhra Pradesh,



Fig. 19



Fig. 20



Fig. 21

Fig.19 *Hoplonomia westwoodi*, female, mesosoma,
 Fig. 20 *H. elliotii*, female hind leg,
 Fig. 21 *H. westwoodi*, female hind leg

Karnataka, Pondicherry, Rajasthan, Tamil Nadu and West Bengal (Fig. 27)

Materials Examined: Andhra Pradesh, Hyderabad, Utrap, 17.38N 78.45E, 14-20. x.1997, 1 ♂, leg. Dr. Olejnicek (OOL): Bapatla, 15.93N; 80.38E, 12. xii. 2006, 1 ♀, coll., David, K.J.

Goa, Mormugao, 15.37N; 73.87E, vi. 1925, 1 ♂, ix. 1925, 1 ♀, leg. J.C. Bridwell (USNM).

Gujarat, Banas kantha, Deesa, 24.26N; 72.18E, iv. 1898, 1 ♂, x.1898, 1 ♂, iii. 1899, 2 males, 3 females, leg. C.G. Nurse (BMNH).

Jharkhand, Ranchi, 23.37N; 85.32E, iv. 1957, 1 ♂, leg. G. Angalet (USNM).

Karnataka, Mangalore, 12.86N; 74.84E xi.1926, 3 ♀, leg. J.C. Bridwell (USNM); Bangalore, GKVK, 930m, 12.76N; 77.74E, 1 ♀, 5. vi. 2013, coll. Girish; 1 ♀, 23. iv. 2012, coll. Arun B.C; 1 ♀, 7. i. 2014, 1 ♀, 20. i. 2014, coll. Arati Pannure; 1 ♂, 10. ii. 2008, coll. Nayana, E. D; 4 ♀ and 1 ♂, 4, 5, 6, ix. 2014, coll. Pradeep; GKVK, 934m, 12.76N; 77.74E, 1 ♀ and 3 ♂, 31. i. 1982, coll. B. Mallik; Hebbal, 900m, 13.03N 77.59E, 2 ♀, 31. x. 2014, 1 ♀, 11. xi. 2014, 1 ♀, 16. xi. 2014, 1 ♀, 21. ii. 2015, 1 ♂, 6. i. 2015, 1 ♂, 20. xi. 2015, coll. Zameeruddin; Sadahalli, 906m, 13.21N; 77.64E, 1 ♀, 6. ii. 2015, 1 ♀, 26. ii. 2015, coll. Zameeruddin; Belgaum, Arabhavi, 582m, 16.22N; 74.82E, 2 ♀, 20. ix. 2014, coll. Revansidda; Bellary, 15.14N; 76.92E 1 ♀, 21. ix. 2011, coll. M. Srinivasa; Chikkamagaluru, Kadur, 758m, 13.49N; 75.73E, 1 ♀, 24. xi. 2014, coll. Prashantha, C; Mudigere (20 km SW), 2 ♂, 15. iii. 2008, coll. Nayana, E; Hassan, karekere, 934m, 12.96N; 76.25E, 2 ♀, 23. vi. 2014, coll. Zameeruddin; Dakshina Kannada, Kankandi, 20m, 12.86N; 74.85 E, 1 ♀, 5. iii. 2015, coll. Prashantha, C; Kodagu, Ponnampet, 85m, 12.14N; 75.94E, 1 ♀, 21. vii. 2015, coll. Prashantha, C; Kolar, Horticulture college, 830m, 13.13N; 78.16E, 1 ♀, 16. xii. 2014, coll. Zameeruddin; Koppal, Munirabad, 466m, 15.27N; 76.32E, 1 ♀, 5. xii. 2012, coll. Najeer; Mandya (Sasalu), 841m, 12.52N; 76.89E, 2 ♀, 6. x. 2014, coll. Pradeep; VC farm, 727m, 12.52N; 76.89E, 2 ♂, 10. viii. 1982, coll. B. Mallik; Mysore, Chinnamballi, 716m, 12.09N; 76.83E, 2 ♀, 19. vii. 2015, coll. Prashantha, C; COH, 824m, 13.13N; 78.16E, 1 ♂, 20. vii. 2015, coll. Prashantha, C; Hunsur, 12.30N; 76.29E, 1 ♀, 18. iv. 2009, Dhanyavathi, P.N; Nanjangud, 24.64N; 72.77E 1 ♂, 24. i. 2009, coll. Dhanyavathi, P. N; Banur, 13.32N; 75.77E 1 ♀, 23. iv. 2009, Dhanyavathi, P.N. Udupi, Brahmavar, 13.43N; 74.74E, 1 ♂, 12. iv. 1985, coll. A.R.V Kumar.

Kerala, Malappuram, Calicut University, botanical garden, 11.13N; 75.89E 27. ix. 1986, 1 ♂, 1 ♀, leg. E.E. Grissell (USNM); Palakkad, Walayar Forest, 10.84N; 76.84E 700ft, ix.1959, 1 ♀x. 1959, 5 ♂ 9 ♀, leg. P.S. Nathan (RMNH), ix. 1953, 1 ♀ leg. P.S. Nathan (IRSNB).



Fig. 22. *Crocisaspidia buddha*, female



Fig. 23

Fig. 22 *Crocisaspidia buddha* female; Fig. 23 *C. buddha*, male

Maharashtra, Amraoti Dist., Melghat Tiger res, Dhakna, 21.15N; 77.64E, 1300ft, 21. ii. 1976, 1 ♂, leg. M.L. Ripley (USNM); Raigad, Matheran, 18.98N; 73.26E iii. 1899, 1 ♀ (BMNH), 3 ♂ 3 ♀ iv. 1899, 1 ♂, leg. C.G. Nurse (BMNH); Bombay Presidency, 19.04N; 72.90E, 1 ♀ (BMNH).

Orissa, Teypone, 20.5N; 84.4E, 1775ft, ix. 1958, 5 ♀ x. 1958, 6 ♀ leg. P.S. Nathan (RMNH).

Pondicherry, Karaikal, 11.92N; 79.83E, 22. ii. 1946, 1 ♂ leg. P.S. Nathan (USNM); i. 1964, 1 ♂, iii. 1964, 1 ♂, vii. 1964, ♀ leg. P.S. Nathan (SMUK); xii. 1958, 1 ♀, .1959, 2 ♂, iii. 1962, 2 ♂, 1 ♀ iii. 1962, 25 ♂, iv. 1962, 58 ♂, 2 ♀ vi. 1962, Ashmead, 5 ♀ vii. 1962, 2 ♂, 4 ♀, viii. 1962, 3 ♀, iii. 1964, 1 ♀ leg. P.S. Nathan (RMNH); Nettapackam, 11.86N; 79.63E, x. 1963, 1 ♂, leg. P.S. Nathan (SMUK); 10km N.

Auroville, Discipline Farm, 12.00N; 79.80E, 2. iii. 2010, 1 ♀, leg. & col. F. Burger: Karaikal Territory, Kurumbagaran, 10.92N; 79.83E, 12. viii. 1954, 1 ♀, ix. 1954, 1 ♀, leg. P.S. Nathan (IRSNB).

Rajasthan, Abu, 24.64N; 72.77E 1 ♀, leg. C.G. Nurse (NHMUK).

Sikkim, 27.60N; 88.45E 1 ♂, leg. Fedschlotter (UZMK).

Tamilnadu, Coimbatore, 11.00N; 76.96E 1400ft, vi.1965, 1 ♂, 2 ♀, ix. 1964, 1 ♀, leg. P. S. Nathan (SMUK), 1. vii. 1953, 2 ♀, ix. 1953, 2 ♀, xi. 1953, 3 ♂ leg. P.S. Nathan (IRSNB); Palani Hills, 10.49N; 77.50E Educu Mtn, 19. xi. 2005, *Mentha* sp., 1 ♂, leg. et col. F. Burger, ix. 1951, 1 ♂, leg. P.S. Nathan (USNM); Tuticorin, 8.80N; 78.14E, 18. x.1938, 1 ♀

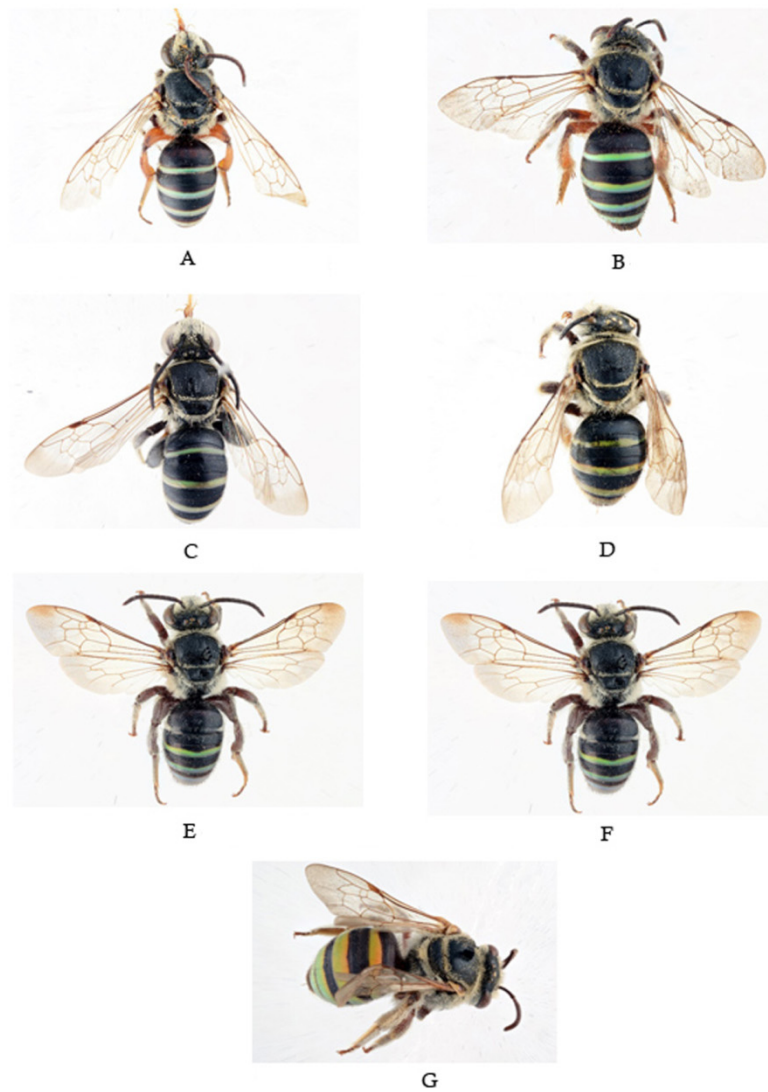


Fig. 24.

Fig. 24 A- *Hoplonomia westwoodi* male, B- *H. westwoodi* female, C- *Hoplonomia elliotii* male, D- *H. elliotii* female, E.- *H. incerta* male, F- *H. incerta* female, G- *H. callichlora* female

(BMNH), vii. 1958, 1 ♂, viii. 1958, 1 ♀, ix. 1959, 1 ♂, iv. 1962, 12 ♀, leg. P.S. Nathan (RMNH); Annamalai Hills, 11.11N; 77.35E, Cinchona, 3500ft, v. 1964, 1 ♂, leg. P.S. Nathan (RMNH); 1.vii.1953, 2 ♀ Tranquebar, 11.02N; 79.85E, vi. 1951, 6 ♀ 9. xii. 1951, 1 ♂, vii. 1953, 3 ♀ xii. 1953, 4 ♀, leg. P.S. Nathan (IRSNB); Nilgiris Hills, Moyar camp, 11.41N; 76.69E, 2100ft, iv. 1954, 13 ♂, leg. P.S. Nathan (IRSNB); Nilgiris hills, Singara, 11.34N;

76.81E, 3400ft, v. 1954, 1 ♀, 1 ♂, leg. P.S. Nathan (IRSNB).

Diagnosis: Similar to *H. elliotii* with posterior lateral angles of the scutellum tuberculate and post scutellum with two teeth; but smaller; posterior femur and tibia not so swollen and thick; inner angle of the apex of tibia is produced and rounded and not forming flat truncate process as in *H. elliotii*; abdomen beneath and posterior legs pale rufotestaceous

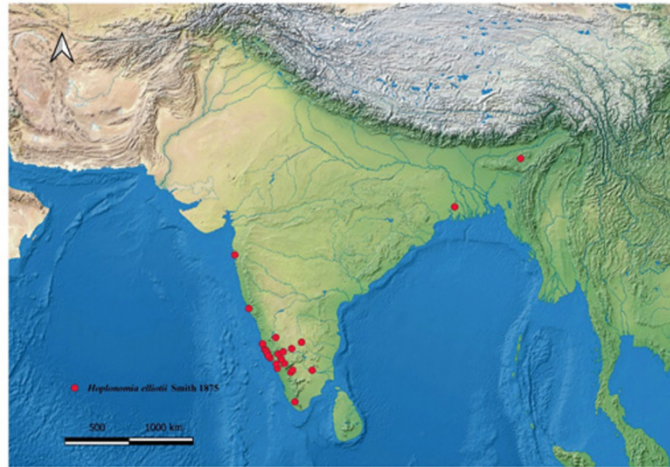


Fig: 25

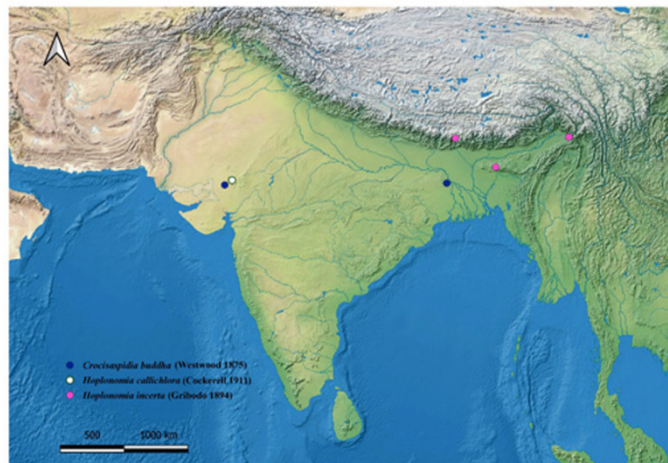


Fig:26

Fig. 25 Distributional map of *Hoplonomia elliotii* recorded so far from India; Fig. 26 Distributional map of *Crocisaspida buddha*, *H. callichlora*, *H. incerta* recorded so far from India

**Subfamily Nomiinae,
Genus: *Crocisaspida* Ashmead**

Diagnosis: Scutellum is characteristic as compared to other Nomiinae for its lateral projections are flat with raised carinate edges and extend straight back not upward from the rest of scutellum. All species are larger with 9 -16mm length. Enamel bands on tergites are on apical margins. In females basal plate of hind tibia is completely rounded. The propodeal area ‘V’ shaped ending on the posterior face vertically, horizontal only in its lateral parts. Tegulae is in the form of ears.

Distribution: This genus is basically Afrotropical (9 species), one species in Madagascar, and three in the Arabian Peninsula. Currently only a single species is known from India and it is known from West Bengal and Gujarat.

5. *Crocisaspida buddha* (Westwood, 1875)

Nomia budha Westwood, 1875: 209, pl. IV, fig. 1, ♂. Lectotype ♂: India, OUMNH, designated by Pauly 1990: 48 (reviewed)

= *Nomia bahadur* Nurse, 1904: 568, ♀, ♂.

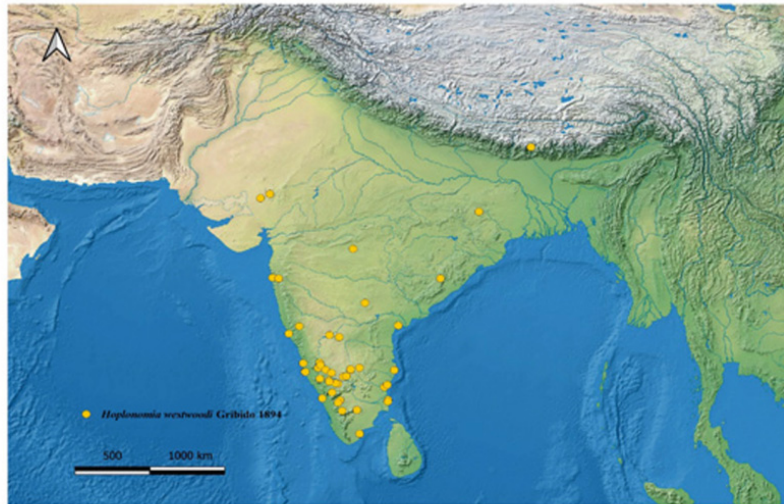


Fig:27

Fig. 27 Distributional map of *Hoplonomia westwoodi* recorded so far from India

Lectotype ♀: Deesa, BMNH (examined)
 Distribution: West Bengal, Gujarat (Fig. 26)

Materials Examined: West Bengal, 23.55N 88.57
 Chapra (Mackenzie), 1 ♂ (NHMUK).

Gujarat, Deesa, 24.25N; 72.18E ix.1901, 1 ♀ leg.
 C.G. Nurse (NHMUK)

Diagnosis: Males are with characteristically shaped posterior tibiae. In females integumentary bands are pale blue green in color; all bristles of the tibia and posterior tarsi with whitish grey bristles; first tergite with sparse punctuations.

Key to Genera and Species of *Hoplonomia* and *Crocisaspidia* of India

Males: antenna of 13 segments; hind leg without scopal hair and femora often thickened; no sting.

Females: antenna of 12 segments; hind legs with scopal hairs; sting.

Males (male of *H. callichlora* unknown)

1. Scutellum with a pair of lateral ear-shaped lamella, metanotum with a pair of large projections (Fig.1) basitarsus of hind leg is large*Crocisaspidia buddha*

- Scutellum mutic (Fig. 2) or with a pair of much reduced teeth (Fig. 3), metanotum with a pair of narrow projections (Figs. 2, 3); basitarsus of hind leg narrow..... *Hoplonomia*

2. First tergum without enamel-like band, but with lateral tuft of white hairs; terga 2 to 4 with yellow, green or blue enamel-like apical bands (Fig.7).....*H. incerta*

- First to fourth terga with yellow, green or blue enamel-like apical bands (Figs. 8, 3)

3. Hind leg nearly completely black, only the apical lobe of the tibia amber, hind femur very thick (Fig.10).....*H. elliotii*

- Hind leg nearly completely amber, hind femora moderately thick (Fig.11).....*H. westwoodi*

Females

1. Scutellum with lateral ear-shaped lamella, metanotum with a pair of large projections (Fig.12)*Crocisaspidia buddha*

- Scutellum mutic, metanotum with a pair of small and narrow projections (Fig.13)Genus *Hoplonomia*

2. First tergum without enamel-like band, but with lateral tuft of white hairs; terga 2 to 4 with yellow, green or blue enamel-like apical bands (Fig.14).....*H. incerta*

- First to fourth terga with yellow, green or blue enamel-like apical bands.....3

3. First tergum with enamel-like apical band about twice as broad, covering the totality of the apical depression (Fig.15).....*H. callichlora*

- First tergum with enamel-like band not exceeding half of the apical depression.....4

4. Scutum with dense punctuation (Fig.18); hind legs largely amber (Fig. 20).....*H. elliotii*

-Scutum with more spacer punctuation (Fig. 19); hind legs largely black (Fig. 11).....*H. westwoodii*

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