



## Research paper

### Redescription of *Cletomorpha benita* KIRBY, 1891 (Hemiptera: Heteroptera: Corieidae) first time from Northeast with an updated checklist from the world

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**Abstract:** Ground bug, *Cletomorpha benita* Kirby, 1891 (Hemiptera: Heteroptera: Corieidae) reported only Indonesia Blöte. 1935, for the first time reported from the North-Eastern region, of India. Redescription of species is given first time after 1891. The new distribution record from Indonesia to Mizoram, India showing the long dispersal of the species. An updated checklist of *Cletomorpha* Mayr, 1866 from the world has been provided along with their distribution.

**Keywords:** *Cletomorpha benita* KIRBY, 1891, Hemiptera: Heteroptera: Corieidae

#### Introduction:

The *Cletomorpha benita* Kirby, 1891 belonging to the family Corieidae, Leach, 1815 commonly known as squash bugs found on squash plant. Only 5 species of genus *Cletomorpha* are known to occur from India (Gupta and Singh, 2013) and Distant, 1902. *Cletomorpha benita* Kirby, 1891 was collected after first time from Northeast region, earlier it was recorded

from the Sumatra in the Blöte, 1938. *Cletomorpha* Mayr, 1866 have 22 species from the world and 5 species reported from India.

#### Materials and Methods:

The steep slopes are covered by orchids, rhododendrons and majorly with bamboo plantations, specimen was collected from DTR and preserved in naphthalene balls charged insect box for identification.

#### Results:

##### TAXONOMIC ACCOUNT

Family Coreidae Leach, 1815

Subfamily Coreinae Leach, 1815

Genus *Cletomorpha* Mayr, 1866

1866. *Cletomorpha*: Mayr Zoologischer Theil, Zweiter Band, 1. Abtheilung, B. Part 2. 120.

##### Diagnostic characters of genus

Type specimen: *Cletus bellulus* Stål, 1860, Java. (Original combination).

**Distribution:** Oriental, Malayan and Australian region.

***Cletomorpha benita* Kirby, 1891**

1891. *Cletomorpha benita*: Kirby, *Journal of the Linnean Society, Zoology* 24 149–150:96-97.

**Material examine:** ♂, 1ex., Mizoram, Mamit, DTR, Teirei lui, 28.xi.18, 1 ex, Coll. Sandeep Kushwaha.

**Redescription:**

The species *Cletomorpha benita* was described by Kirby, in 1891 without any detailed illustrations, since after 1891 it was reported by some authors without any description hence for the clarity of the taxa a detailed account of the species has been given with measurements and a detailed account.

**Colour:** Body golden brown, abdomen light yellowish brown with black spots, legs brown, corium golden brown black with black spots, membrane black.

**BODY:** Golden brown, Total length from head to abdomen  $6.77 \pm 0.05$  mm, width  $3.15 \pm 0.06$  mm; **EYES:** 0.508 mm, black in colour; **HEAD:** length 1.201 mm, width of anterior lobe of head 0.694 mm, width of posterior lobe of head 1.712 mm. Head sub oval, narrow; **ANTENNAE:** Four Jointed, First joint 1.312 mm, second joint 1.462mm., third joint 1.182, fourth joint 0.891 mm in length; 1st joint of antennae fuscous, 3<sup>rd</sup> joint longest; 2<sup>nd</sup> and 3<sup>rd</sup> joint black in colour; **ROSTRUM:** Total length  $2.323 \pm 0.03$  mm, First joint 0.794 mm, second joint 0.700 mm, third joint 0.341 mm, fourth joint 0.488. Rostrum with the first joint reaching the middle of the anteocular portion of the head, the fourth joint passing the 2nd joint of the leg. **LEGS-FORE LEG:** length (including tarsi)  $3.96 \pm 0.05$  mm, length of Coxa 0.243 mm, trochanter 0.464 mm, femur light brown with black spines, Length of femur 1.421 mm, tibia 1.302 mm light brown with black spines, tarsus length 0.342 mm, length of 1st, 2nd and 3rd tarsal joints are 0.124 mm, 0.198 mm and 0.074 and having bristles. **PRONOTUM:**

Length of pronotum more than half of its width, the anterior lobe constricted, which is gibbous with a central globular ridge and pronotal angles very sharp and having saw line margins, pronotum having thick punctures; width of pronotum 3.187 mm and length 1.384 mm. **SCUTELLUM:** Length 0.917 mm, Width 1.180 mm, Scutellum chocolate brown triangular having thick punctures and apex with creamy spot. **ABDOMEN:** length 3.263 mm, 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> abdominal segments are 2.353, 2.718, 2.826 and 2.385 mm in width. Creamy in color with scattered black spots. **CONNEXIVUM:** light brown with black lateral margins above and cream in below. **GENITAL SEGMENT:** length 1.031mm and width 0.766 mm having black punchers. **CORIUM:** walnut brown with black punchers all over, very thickly at apex and having white lateral spots. (Plate a and B) **Distribution:** India: Mizoram, and Gujarat. Elsewhere: Indonesia, and Sri Lanka.

Table 1. Updated Checklist of *Cletomorpha* Mayr, 1866 from the world (Source:

<http://coreoidea.speciesfile.org/Common/basic/Taxa.aspx?TaxonNameID=1188617>).

1. *Cletomorpha affinis* Blöte, 1935: Africa, Southern Africa, Namibia, Namibia, Sissanto
2. *Cletomorpha albopunctata* Villiers, 1954
3. *Cletomorpha alternata* (Dallas, 1852)
4. *Cletomorpha bellula* (Stål, 1860)
5. *Cletomorpha benita* Kirby, 1891
6. *Cletomorpha bloetei* (Schouteden, 1938)
7. *Cletomorpha denticulata* Stål, 1871
8. *Cletomorpha elevator* (Fabricius, 1803)
9. *Cletomorpha hastata* (Fabricius, 1787)

10. *Cletomorpha indicator* Haglund, 1895
11. *Cletomorpha insignis* Distant, 1902
12. *Cletomorpha kirbyi* Distant, 1901
13. *Cletomorpha lanciger* (Fabricius, 1794)
14. *Cletomorpha mackayensis* Distant, 1911
15. *Cletomorpha nyasana* Bergroth, 1914
16. *Cletomorpha orientalis* (Schouteden, 1912)
17. *Cletomorpha punjabensis* Ahmad, Rab & Kamaluddin, 2000
18. *Cletomorpha raja* Distant, 1901
19. *Cletomorpha saphisa* Brailovsky, 2007
20. *Cletomorpha simulans* Hsiao, 1963
21. *Cletomorpha unifasciata* Blöte, 1935
22. *Cletomorpha walkeri* Kirby, 1891

#### Discussion:

An updated Checklist of Genus *Cletomorpha* Mayr, 1866 has been provided and reported one species of *Cletomorpha* from Northeast State Mizoram, India with redescription for the first time.

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#### References:

- Distant, W. L. (1903) *The fauna of British India including Ceylon and Burma, Rhynchota*, 2(1), 128-129. (Published by Taylor and Francis, London).
- Gupta, R. and Singh, D. (2013) Studies on two Indian species of genus *Cletomorpha* Mayr (Hemiptera: Coreidae). *Journal of Insect Science* 26 (2), 21A-214.
- Blöte, H. C. (1938) Catalogue of the Coreidae in the Rijksmuseum van Natuurlijke Historie: Part IV. Coreinae, 20(3), 275-308.

PLATE A

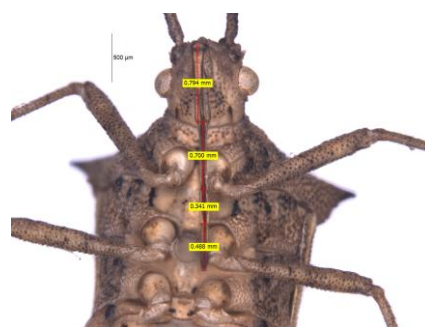
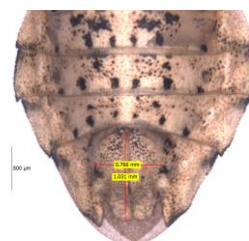
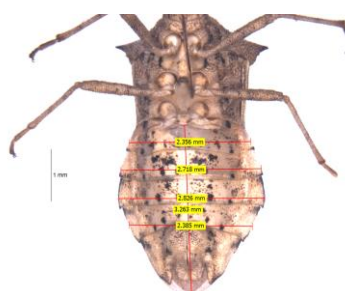


PLATE B

