

REVISION OF SPIDERS OF THE GENUS *CTENUS* WALCKENAER
FROM INDIA (ARANEAE : CTENIDAE)

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(With 12 Text-figures)

INTRODUCTION

The Ctenidae is a small family of spiders. The members of this family are very close to the family Clubionidae and Lycosidae but due to their peculiar arrangement of eyes they are separated in an independent family. Though the family is poorly represented in this country, Indian *Ctenus* received considerable attention by previous workers like Simon (1897, 1904), Cambridge F. O. P. (1897, 1902), Gravely (1931) and recently by Tikader (1973, 1976).

We felt it is very essential to revise the genus *Ctenus* because Gravely has not described the internal genital characters which are good differentiating characters of some species. We have received *Ctenus* collections from our various regional Stations and Western Regional Station of Zoological Survey of India for our studies. We also got the opportunity to study the type specimens of previous European workers like Gravely, Simon and F. O. P. Cambridge which were deposited in the National Collection of Zoological Survey of India, Calcutta ; Museum National Histoire Naturelle, Paris ; British Museum (Natural History), London and Oxford University Museum, Oxford respectively. We have illustrated and redescribed ten known species and a new species in details in this revisionary work and included also internal genital characters because the superficial architecture of the epigyne of different species is almost of uniform pattern. A key to the species is given for easy identification. We have come across one synonymy which is mentioned in this paper.

These are nocturnal wandering spiders hunting their prey over foliage and leaf litter on the ground. They take shelter in the holes or under stones during day time.

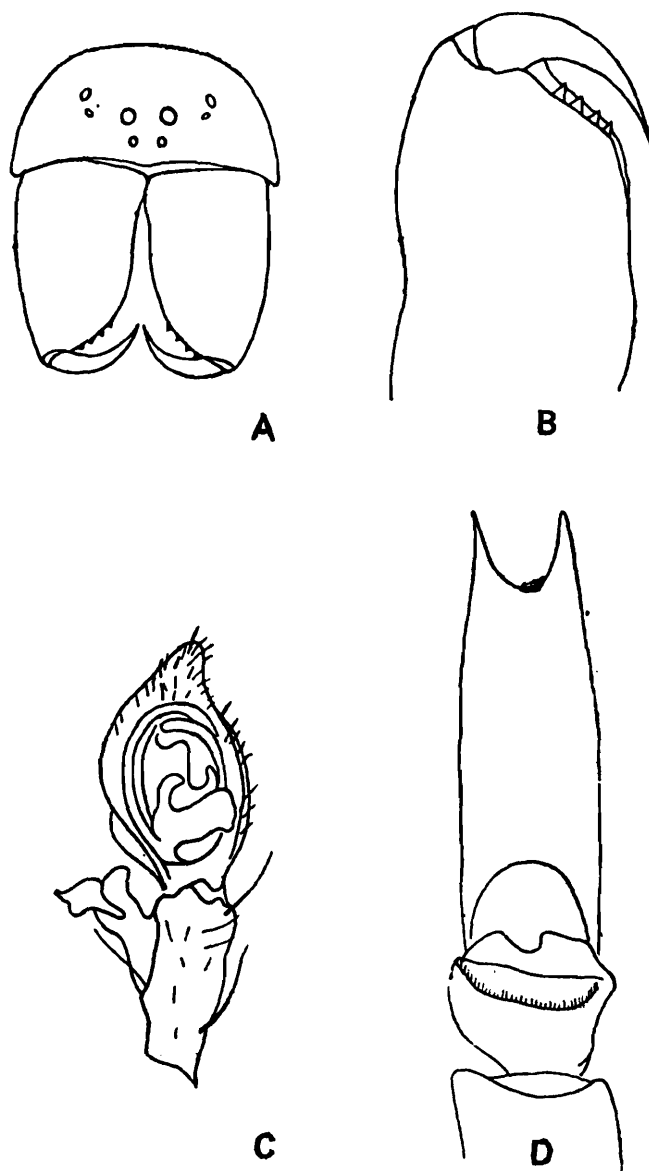
Type specimens of new species are deposited in the National Collections of Zoological Survey of India, Calcutta.

*Present address : Zoological Survey of India, Calcutta

Genus *Ctenus* Walckenaer

(Text-fig. 1)

1805. *Ctenus* Walckenaer, *Tab. Aran.*, 18—Arachn.
 1832. *Phoneutria* : Perty, *Delec. Anim. Bras.*, 1832 : 197.
 1850. *Phoneutria* : C. Koch, *Ueb. Arachn. Syst.*, 5 : 86.
 1876. *Microctenus* : Keyserling, *Verh. zool. bot. Ges. Wien.*, : 690.
 1878. *Leptoctenus* : L. Koch. *Ar. Austr.*, : 994.
 1880. *Isoctenus* : Bertkau, *Mem. Acad. Belg.*, 63 : 56.
 1887. *Oligoctenus* : Simon. *Annls. Soc. ent. Fr.*, : 186.
 1897. *Ctenus* : Simon, *Mem. Soc. zool. Fr.*, 10 : 252.
 1897. *Ctenus* : Cambridge, *Ann. Mag. nat. Hist.*, (6) 20 : 342.



Text-fig. 1.—Important characters of the genus *Ctenus* : A—Face, front view showing eye arrangement, B—Left chelicera, showing teeth, C—Male palp, showing tibial apophysis with lamina, D—Trochanter of leg, showing notch ventrally.

1906. *Ctenus* : Mabile. *Annls. Soc. ent. Fr.*, 75 : 32.
 1931. *Ctenus* : Gravely, *Rec. Indian Mus.*, 33 (3) : 211.
 1973. *Ctenus* : Tikader, *Curr. Sci.*, 42 (24) : 862.

Characters : Both the rows of eyes recurved but anterior row strongly recurved so that the anterior laterals come in line with posterior median thus forming three rows of eyes (Text-fig. 1A). Anterior lateral eyes are smaller than anterior medians. Tarsi bears two claws. Retromargin of chelicera armed with four or sometimes with five teeth (Text-fig. 1B). Labium longer than broad. Male palp always with the tibial apophysis and with lamina (Text-fig. 1C). Trochanter of legs show a notch ventrally (Text-fig. 1D).

Type species : *Ctenus dubius* Walck.

Distribution : Cosmotropical and Cosmosubtropical.

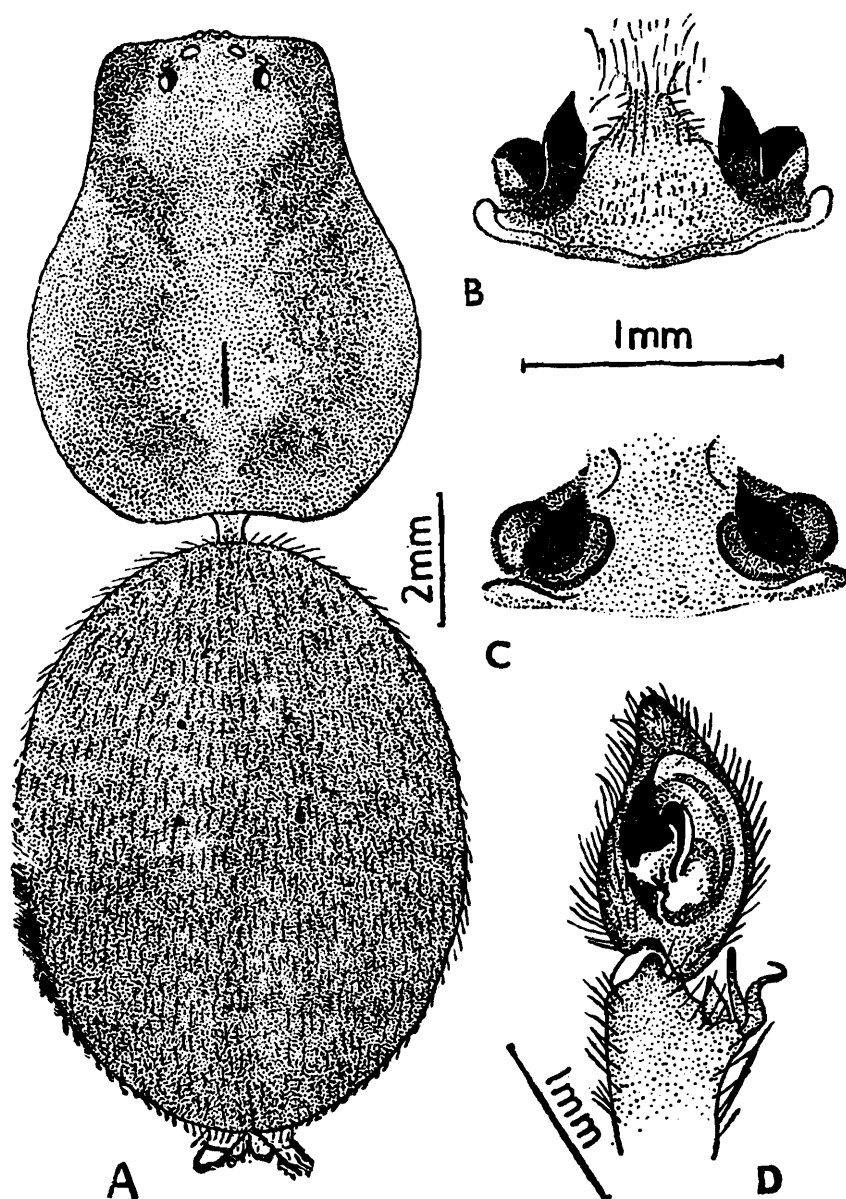
KEY TO THE SPECIES OF THE *CTENUS* WALOKENAER

1. Median piece of epigyne inverted T-shaped,
cross piece long and bowed. *ceylonensis*.
Median piece of epigyne not inverted T-shaped. 2.
2. Median piece of epigyne oval or rectangular,
lateral pieces less prominent. 3.
Median piece of epigyne triangular or square,
lateral pieces well developed. 5.
3. Horns arising from posterior lateral angles of
epigyne, much smaller. 4.
Horns arising from posterior lateral angles
of epigyne, bigger. *bomdilaensis*.
4. Horns of epigyne directed forwards and in-
wards. *himalayensis*.
Horns of epigyne directed backwards. *cochinensis*.
5. Median piece of epigyne triangular, lateral
margins dark in colour. 6.
Median piece of epigyne longitudinally
rectangular, lateral margins not dark. *indicus*.
6. Lateral piece of vulva clearly separated from
median piece. 7.
Lateral piece of vulva closely in contact with
median piece. 9.
7. Longitudinal slit is present between lateral
and median piece. 8.
Longitudinal slit is not present between
lateral and median piece. *meghalayaensis*.
8. Lateral piece bifurcated posteriorly. *kapuri*.
Lateral piece not bifurcated posteriorly. *andamanensis*.

9. Lateral piece flat and spermatheca in the internal genitalia is directed posteriorly laterally. ... *smythiesi*.
- Lateral piece inverted mango-shaped or slightly so is directed inwards and upwards. ... 10.
10. Tibial apophysis of male palp stout and with a square shaped lamina. ... *sikkimensis*.
- Tibial apophysis of male thin and an accessory pointed apophysis present at the base of palp. ... *thorelli*.

1. *Ctenus ceylonensis* Cambridge
(Text-fig. 2)

1897. *Ctenus ceylonensis* : Cambridge, *Ann. Mag. nat. Hist.*, (6) 20 : 346-347.
1902. *Ctenus ceylonensis* : Cambridge, *Ann. Mag. nat. Hist.*, (7) 9 : 414.
1902. *Ctenus cuspidatus* : Cambridge, *Ann. Mag. nat. Hist.*, (7) 9 : 406.
1931. *Ctenus ceylonensis* : Gravely, *Rec. Indian Mus.*, 33 (3) : 232.



Text-fig. 2.—*Ctenus ceylonensis* Cambridge : A—Dorsal view of female, legs omitted, B—Epigyne, C—Internal genitalia, D—Male palp.

General : Carapace and legs dark brown, abdomen pale. Total length 17.00 mm. Carapace 7.50 mm. long, 6.00 mm. wide ; abdomen 9.00 mm. long, 7.00 mm. wide.

Cephalothorax : Longer than wide, clothed with pubescence dorsal middle longitudinal area pale. Eyes black, ocular area hairy. Margin of clypeus with erect hair pointed anteriorly. Sternum brown, heart shaped, pointed posteriorly. Labium longer than wide. Maxillae broader distally and distal end with scopulae. Chelicerae chocolate brown, retromargin of fang furrow with four teeth. Legs stout. Male palp as in fig. 2D.

Abdomen : Oval, clothed with pubescence, two pairs of sigillae present dorsally as in fig. 2A. Ventral side dark with two longitudinal rows of white spots extending from epigastric furrow to the base of spinnerets. Epigyne as in fig. 2B. Internal genitalia as in fig. 2C.

Type-specimen : 1 ♀ and 1 ♂ in spirit. (Abdomen of ♀ in bad condition) deposited in the British Museum (Natural History), London.

Type-locality : Sri Lanka.

Distribution : Sri Lanka : Kandy, Galle.

Remarks : *C. cuspidatus* Cambridge is a synonym of *C. ceylonensis* ; Cambridge described *C. cuspidatus* in 1902 on the basis of a male. While examining males of *C. ceylonensis* and *C. cuspidatus* we found that both belong to same species.

Though this species is from Sri Lanka we have included it in this revisionary work because there are possibilities of its occurring in India also ; so far it is not recorded from India.

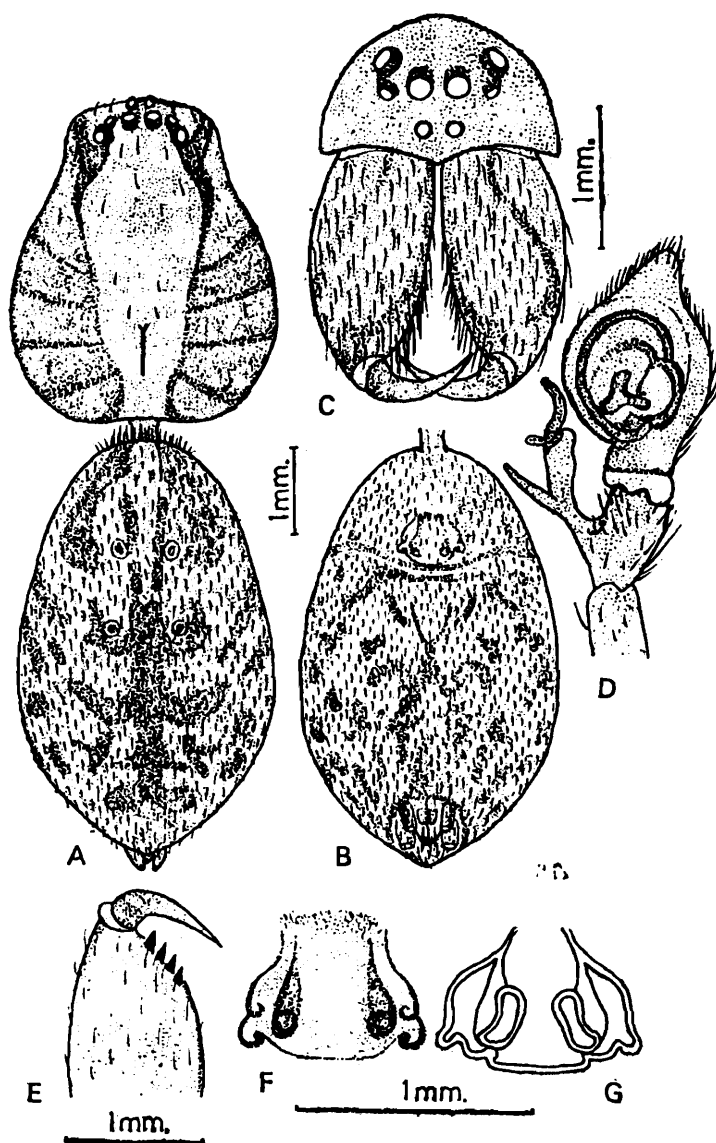
2. *Ctenus bomdilaensis* sp. nov.

(Text-fig. 3)

General : Cephalothorax and legs reddish-brown, abdomen brownish-green. Total length 9.60 mm. Carapace 4.00 mm. long, 3.30 mm. wide ; abdomen 5.40 mm. long, 3.20 mm. wide.

Cephalothorax : Longer than wide, high, clothed with pubescence and some spine like hair, posterior middle provided with a black conspicuous fovea and a light reddish-green longitudinal band extending from ocular area to base of cephalothorax. Eyes in three rows, the anterior lateral eyes being situated in front of the posterior laterals as in figs. 3A, C. Anterior lateral eyes smaller than the anterior medians and posterior laterals are smaller than the posterior medians and all eyes encircled by black patches. Sternum nearly oval, slightly narrow behind, light reddish-green, clothed with spine like hairs. Labium longer than wide and maxillae anteriorly provided

with prominent scopulae. Chelicerae long and strong, brown, inner margin provided with four small teeth as in fig. 3E. Legs robust and strong, provided with black patches, clothed with pubescence, some hairs and spines; tarsus provided with two claws and prominent claw tufts. Tibiae and metatarsi I and II provided with five and three pairs of ventral spines respectively. Male same in colour and size as female, male palp as in fig. 3D.



Text-fig. 3.—*Otenus bomdilaensis* sp. nov., A—Dorsal view of female, legs omitted, B—Ventral view of abdomen, C—Front view of head, D—Male palp, E—Chelicera, showing teeth, F—Epigyne, G—Internal genitalia.

Abdomen : Longer than wide, oval clothed with hair. Dorsum provided with two pairs of sigillae and some deep brown patches as in fig. 3A. Ventral side slightly lighter than the dorsal and provided with some brown patches as in fig. 3B. Epigyne as in fig. 3F. Internal genitalia as in fig. 3G.

Holotype : ♀, **allotype :** ♂ in spirit, deposited in National Collections of Zoological Survey of India, Calcutta, Regd. Nos. 4111/18 and 4112/18 respectively.

Type locality : Bomdila, Arunachal, India. Coll. A. N. T. Joseph, 22. vi. 1966. Allotype, Lingjok village near Kewzing, Bhutan, Coll. G. Ramakrishna, 20. v. 1962.

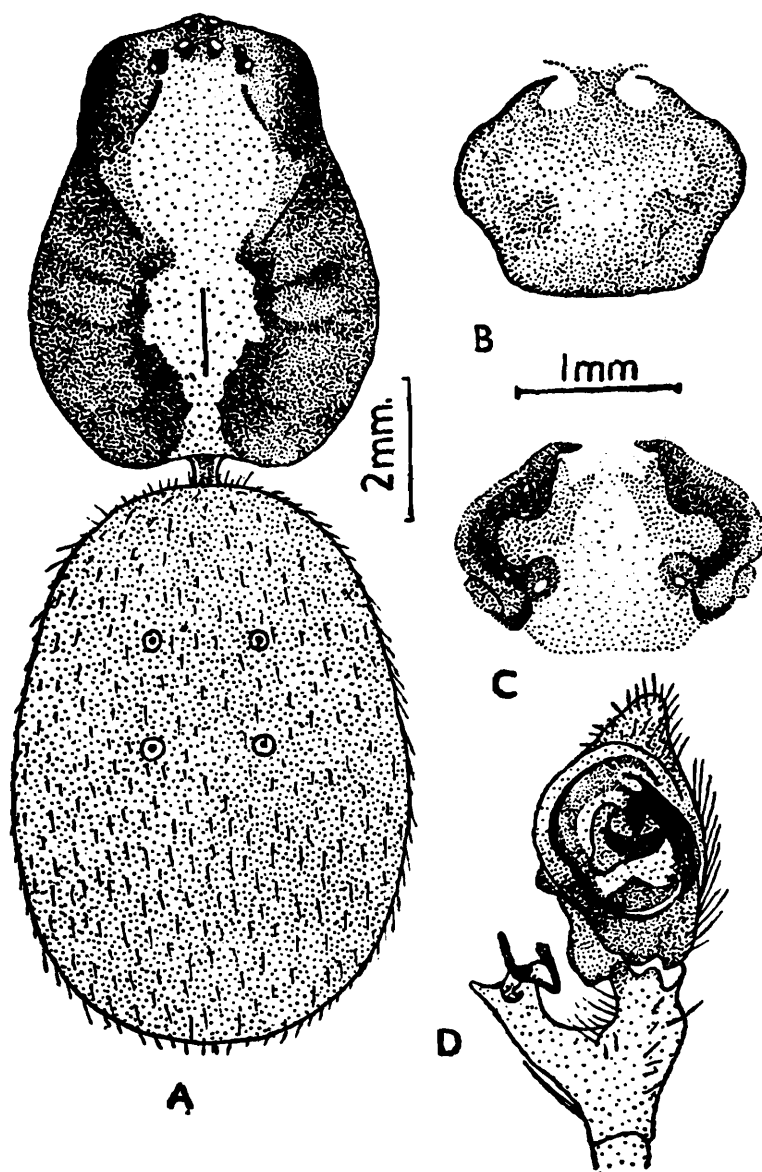
This species resembles *Ctenus meghalayaensis* Tikader but differs from it as follows : (i) Anterior lateral eyes slightly closer to posterior medians than to posterior laterals but in *C. meghalayaensis*, anterior lateral eyes slightly closer to posterior laterals than to posterior medians. (ii) Abdomen dorsally provided with deep brown patches but in *C. meghalayaensis* abdomen uniform coloured without patches. (iii) Epigyne and internal genitalia also structurally different.

3. *Ctenus himalayensis* Gravely

(Text-fig. 4)

1931. *Ctenus himalayensis* Gravely, *Rec. Indian Mus.*, 33 (3) : 234.

General : Carapace and legs yellowish brown, abdomen pale grey.



Text-fig. 4.—*Ctenus himalayensis* Gravely : A—Dorsal view of female, legs omitted, B—Epigyne, C—Internal genitalia, D—Male palp.

Total length 15.40 mm. Carapace 6.50 mm. long, 5.00 mm. wide ; abdomen 8.20 mm. long, 5.80 mm. wide.

Cephalothorax : Longer than wide, narrowing anteriorly, clothed with pubescence. Fovea present and pale yellow area encircles the fovea, posteriorly and to sides with brown streaks and patches. Both rows of eyes recurved but anterior row strongly recurved so that the anterior laterals come in the line of posterior medians thus forming three rows as in fig 4 A. Sternum heart shaped, pointed posteriorly, light brown covered with hair. Labium longer than wide, reddish brown, pale distally. Maxillae broader at the anterior end and bear scopulae. Chelicerae strong, retromargin fang furrow with four teeth. Legs stout, covered with hair and spines. Male palp as in fig. 4D.

Abdomen : Oval, clothed with hair, anterior dorsally, with two pairs of sigillae as in fig. 4A. Ventrally two pairs of longitudinal rows of reddish spots extend from epigastric furrow upto the base of spinnerets. Epigyne as in fig. 4B. Internal genitalia as in fig. 4C.

Type-specimen : 2 ♀ ♀ and 1 ♂ in spirit in good condition. Deposited in National Collection of Zoological Survey of India, Calcutta. Regd. Nos. 1546/18 and 1504/18 respectively.

Type-locality : ♀, Pashok, Darjeeling, Eastern Himalaya, India. Coll. F. H. Gravely, June 1916. ♂, Lebong, (2000-2200m) Darjeeling, Eastern Himalaya, West Bengal, India. Coll. F. H. Gravely, 13. vi. 1914.

Distribution : India : Darjeeling, Eastern Himalaya, West Bengal.

4. *Ctenus cochinensis* Gravely

(Text-fig. 5)

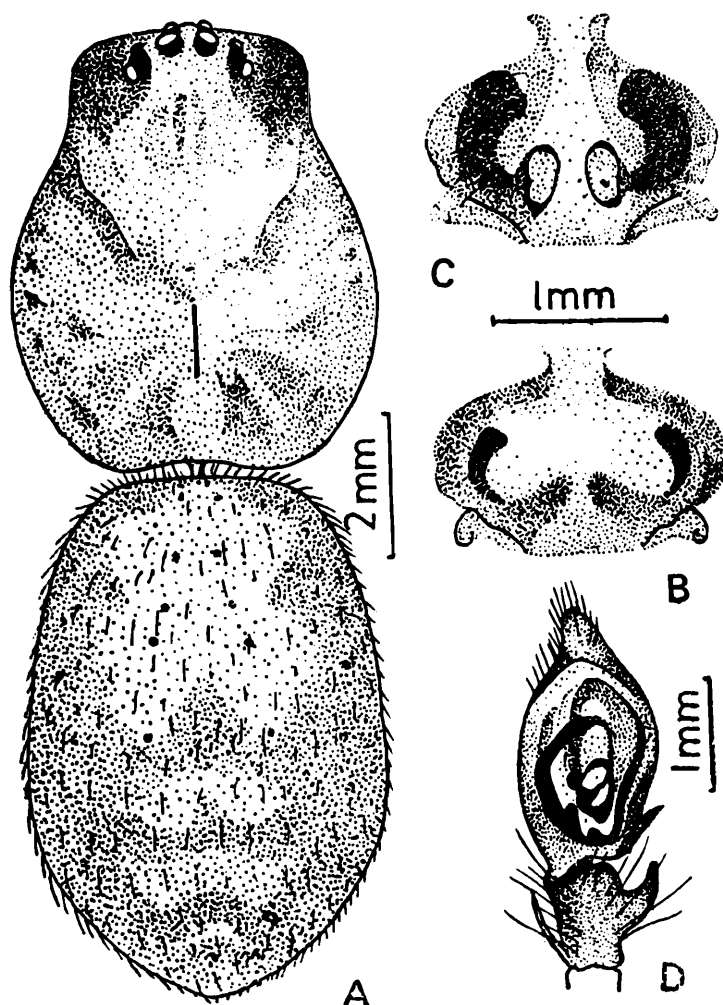
1931. *Ctenus cochinensis* Gravely, *Rec. Indian Mus.*, **33** (3) : 235.

General : Carapace and legs reddish brown, abdomen greenish brown. Total length 14.50, Carapace 6.50 mm. long, 5.20 mm. wide ; abdomen 7.80 mm. long, 5.20 mm. wide.

Cephalothorax : Longer than wide, narrowing anteriorly, middle of thoracic region with a prominent fovea. Brown streaks extend to all sides from fovea. Posterior portion with two dark brown patches. Both rows of eyes recurved but anterior row strongly recurved so that three rows of eyes are formed as in fig. 5A. Bases of all eyes provided with conspicuous black patches as in fig. 5A. Sternum heart shaped, pointed posteriorly, brown, clothed with hair. Labium longer than wide, slightly broad anteriorly. Maxillae broader and pale distally and

distal end provided with inconspicuous scopulae. Chelicerae strong and retromargin of fang furrow with four prominent teeth. Legs long, covered with spines and hairs. Male palp as in fig. 5D.

Abdomen : Oval, anteriorly with one pair of greenish patches, clothed with pubescence. Anterior dorsally with two pairs of sigillae as



Text-fig. 5.—*Ctenus cochinensis* Gravely, A—Dorsal view of female, legs omitted, B—Epigyne, C—Internal genitalia, D—Male palp.

in fig. 5A. Ventrally with two parallel longitudinal rows of reddish spots extending from the epigastric furrow to the base of spinnerets. Epigyne as in fig. 5B. Internal genitalia as in fig. 5C.

Type-specimen : 2 ♀ ♀ and 1 ♂ in spirit in good condition deposited in National Collections of Zoological Survey of India, Calcutta, Regd. Nos. 1550/18 and 1506/18 respectively.

Type-locality : ♀, Kavalai, (430-1000m.), Cochin, Kerala, India. Coll. F. H. Gravely, 24-27. ix. 1914. ♂, Parambikulam, (560—1065m), Cochin, Kerala, India. Coll. F. H. Gravely, 16-24. ix. 1914.

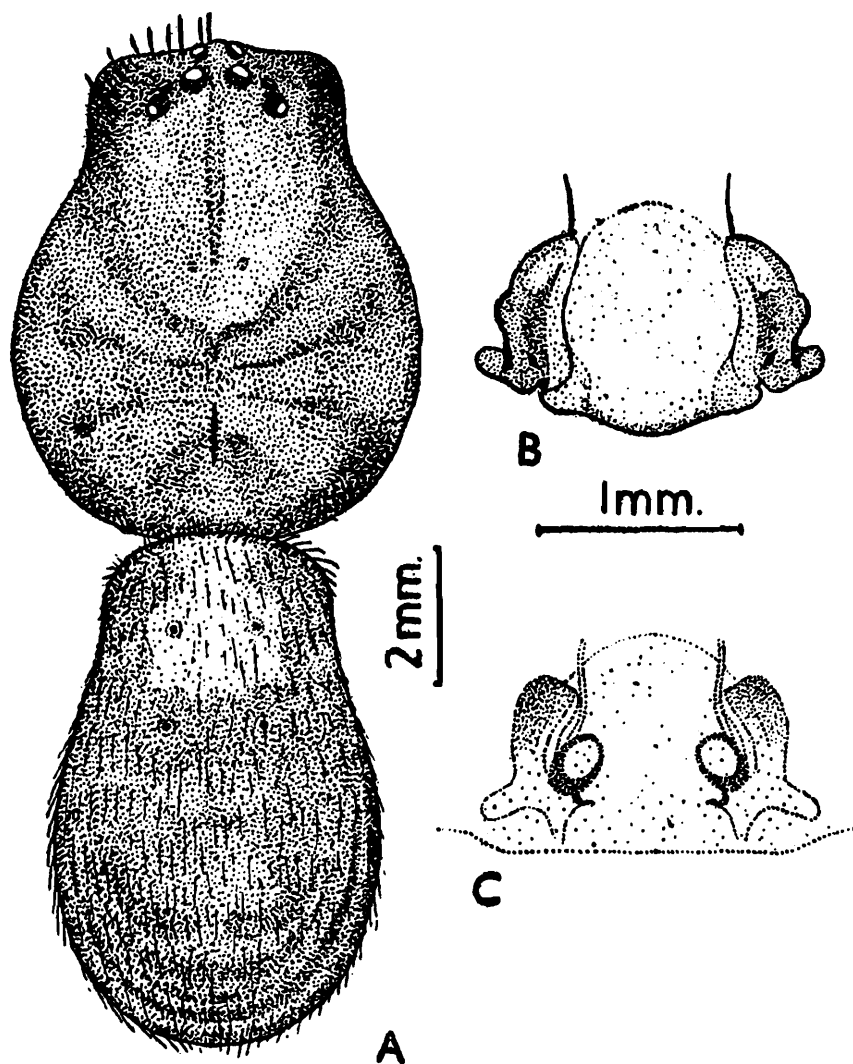
Distribution : India : Kavalai, Parambikulam, Cochin, Kerala,

5. *Ctenus indicus* Gravely
(Text-fig. 6)

1931. *Ctenus indicus* Gravely, *Rec. Indian Mus.*, 33 (3) : 234.

General : Carapace and legs reddish brown, abdomen greyish brown. Total length 16.80 mm, Carapace 8.00 mm. long, 6.20 mm. wide ; abdomen 8.50 mm. long, 5.20 mm. wide.

Cephalothorax : Longer than wide, clothed with pubescence, margin of clypeus with many fine long hair directed forward. Both rows of eyes recurved but anterior row strongly recurved. Posterior medians biggest. Bases of posterior eyes provided with conspicuous black patches as in fig. 6A. Thin brown strips extend to sides and



Text-fig. 6.—*Ctenus indicus* Gravely : A—Dorsal view of female, legs omitted, B—Epigyne, C—Internal genitalia.

posteriorly from foveal area. Sternum heart shaped, reddish brown and margins brown, clothed with erect hair. Labium reddish brown, longer than wide with a notch at the distal extremity, hairy. Maxillae conspicuous distal end broader and paler than that of proximal, scopulae present. Chelicerae chocolate brown, hairy and strong ;

retromargin of fang furrow with four teeth. Legs long, robust and strong, tibiae III and IV with three pairs of ventral spines.

Abdomen : Oval, greyish-brown, clothed with pubescence, dorsally with two pairs of sigillae, anteriorly with mid-longitudinal pale area as in fig. 6A. Ventral side dark brown. Mid-longitudinally two pairs of rows of white spots extend from epigastric furrow to the base of spinnerets narrowing posteriorly, irregular white spots present on sides. Epigyne as in fig. 6B. Internal genitalia as in fig. 6C. Male unknown.

Type-specimen : 2 ♀ ♀, in spirit, deposited in National Collection of Zoological Survey of India, Calcutta. Regd. No. 1505/18.

Type-locality : Parambikulam (560-1065 m.), Cochin, Kerala, India. Coll. *F. H. Gravely*, 16-24. ix. 1914.

Distribution : India : Parambikulam, Kavalai, Cochin, Kerala ; Ootacamund, Tamil Nadu.

6. *Ctenus meghalayaensis* Tikader

(Text-fig. 7)

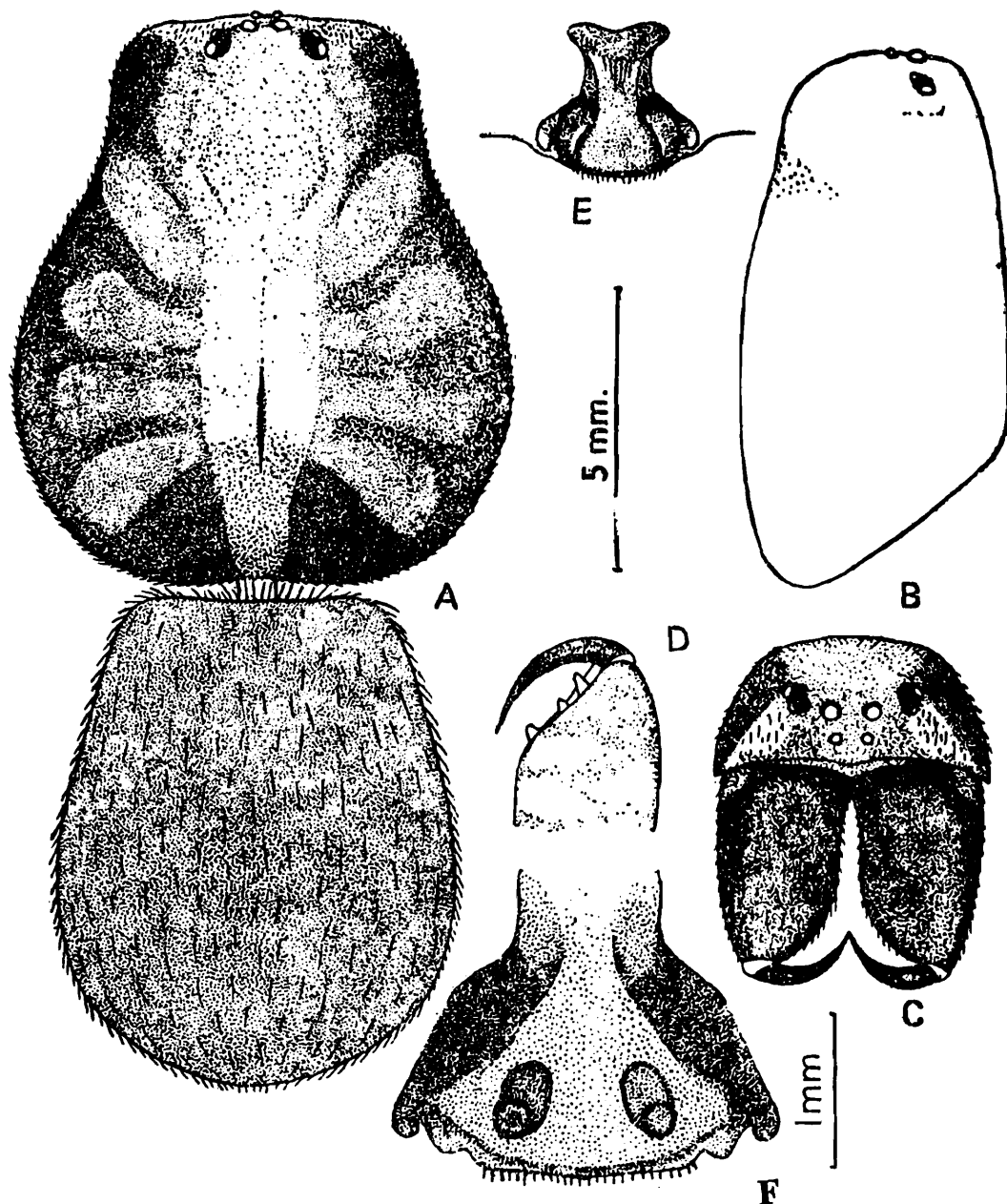
1976. *Ctenus meghalayaensis* Tikader, *J. Bombay nat. Hist. Soc.*, 72 (3) : 791-793.

General : Cephalothorax and legs light reddish-brown, abdomen brown. Total length 20.00 mm. Carapace 10.80 mm. long, 9.00 mm. wide ; abdomen 9.00 mm. long, 7.00 mm. wide.

Cephalothorax : Longer than wide, high and posteriorly with a very steep thoracic declivity as in fig. 7A, clothed with pubescence and few spine-like hair. Middle of cephalothorax provided with a fovea and a longitudinal, broad light pale band, extending from ocular area to base of cephalothorax. Eyes in three rows, the anterior lateral eyes being situated in front of the posterior laterals as in fig. 7A. Anterior lateral eyes smaller than the anterior medians. Sternum nearly oval, pointed behind, deep brown, clothed with black hair. Labium longer than wide, and distal end of maxillae provided with prominent scopulae. Retromargin of chelicera with four teeth as in fig 7D. Legs robust and strong, clothed with hair and spines ; tarsus provided with two claws and prominent claw tuft. Male unknown.

Abdomen : Longer than wide, wider behind, clothed with fine hairs. Ventral side more deep brown than the dorsal side. Epigyne as in fig 7E. Internal genitalia as in fig. 7F.

Type-Specimen : 1 ♀, in spirit in good condition, deposited in National Collection of Zoological Survey of India, Calcutta.



Text-fig. 7.—*Ctenus meghalayaensis* Tikader : A—Dorsal view of female, legs omitted, B—Lateral view of cephalothorax, C—Front view of head, D—Chelicera, showing teeth, E—Epigyne, F—Internal genitalia.

Type-locality : Barapani Road side, Shillong. Meghalaya, India. Coll. A. K. Ghosh, 17. viii. 1973.

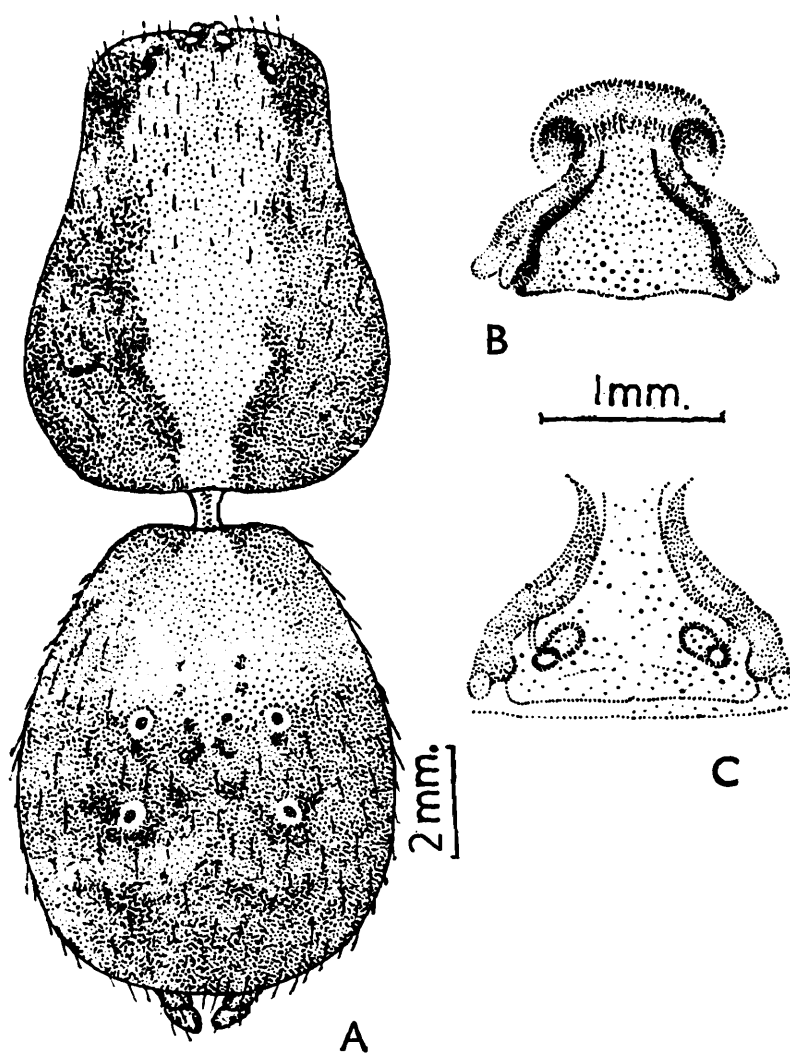
Distribution : So far this species is known only from its type locality.

7. *Ctenus kapuri* Tikader (Text-fig. 8)

1973. *Ctenus kapuri* Tikader, *Curr. Sci.*, 42 (24) : 862-863.

General : Cephalothorax and legs pink-brownish, abdomen brown. Total length 19.00 mm. Carapace 9.00 mm. long, 7.50 mm. wide, abdomen 9.50 mm. long, 7.50 mm. wide.

Cephalothorax : Longer than wide, high, clothed with fine hair and small spines. Middle of cephalothorax provided with a conspicuous fovea and a longitudinal, broad whitish band extending from ocular area to base of cephalothorax. Eyes in three rows, the anterior lateral eyes being in front of the posterior lateral eyes, as in fig. 8A. Anterior lateral eyes smaller than the anterior median. Sternum heart-shaped, slightly narrow behind, deep brown or black in colour, clothed, with black hair. Labium longer than wide. Distal end of maxillae provided with scopulae. Chelicerae strong and black, retromargin of fang furrow of the chelicera with five teeth. Legs robust and strong, clothed with hair and spines ; tarsus provided with two claws. Male unknown.



Text-fig. 8.—*Ctenus kapuri* Tikader : A—Dorsal view of female, legs omitted, B—Epigyne, C—Internal genitalia.

Abdomen : Longer than wide, wider behind, clothed with fine hair. Dorsally provided with two pairs of sigillae. Ventral side deep brown colour and ornamented with conspicuous white rows of dots. Epigyne as in fig. 8B. Internal genitalia as in fig. 8C.

Type specimen : 1 ♀, in spirit in good condition, deposited in National Collection of Zoological Survey of India, Calcutta.

Type locality : Aerial Bay, Diglipur, North Andaman, India. Coll. B. K. Tikader, 23 iv. 1971.

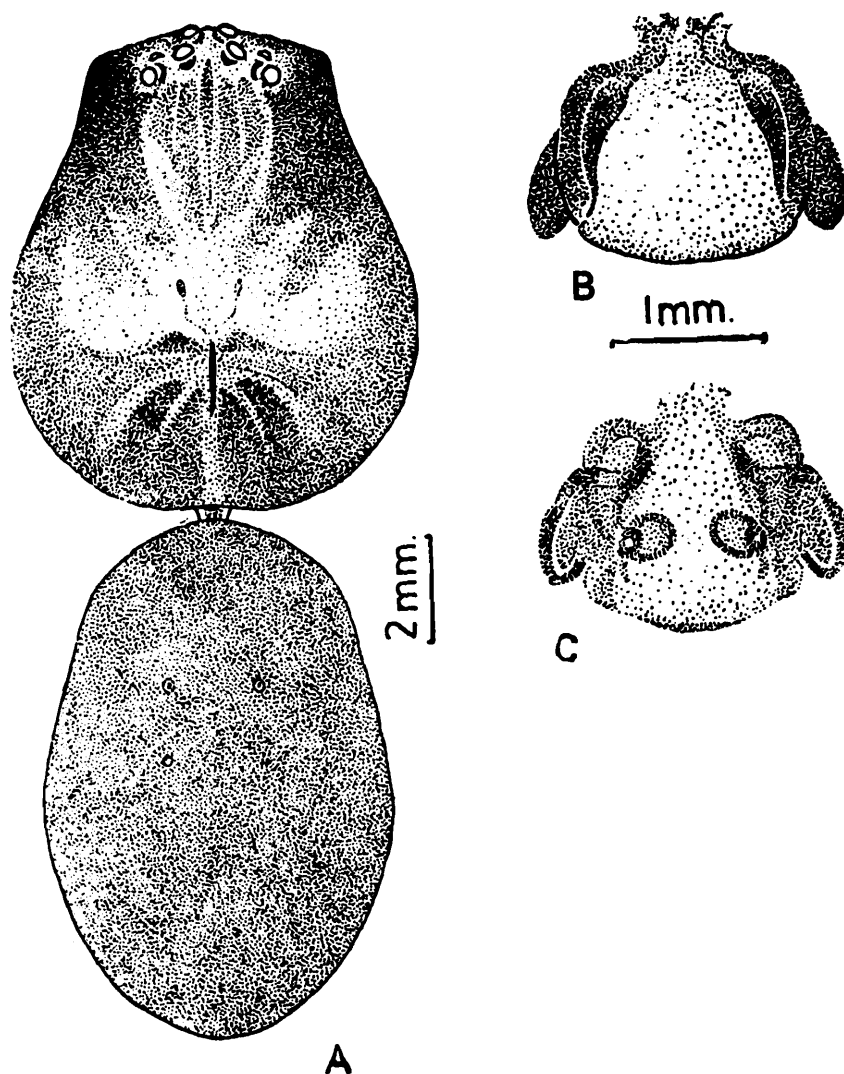
Distribution : So far this species is known only from its type locality.

8. *Ctenus andamanensis* Gravely

(Text-fig. 9)

1931. *Ctenus andamanensis* Gravely, *Rec. Indian Mus.*, 33 (3) : 232.

General : Cephalothorax brown ; legs and abdomen pale brown. Total length 19.50 mm. Carapace 9.80 mm. long, 8.00 mm. wide ; abdomen 10.20 mm. long, 7.00 mm. wide.



Text-fig. 9.—*Ctenus andamanensis* Gravely : A—Dorsal view of female, legs omitted, B—Epigyne, C—Internal genitalia.

Cephalothorax : Longer than wide, highest at the foveal region, narrowing anteriorly. Clypeus as a straight line. Eyes white, both rows recurved, anterior row strongly recurved. Posterior medians largest and anterior laterals smallest as in fig. 9A. Anterior laterals in front of the posterior laterals as in fig. 9A. Brown patches extend from fovea to sides and

posteriorly. Sternum heart shaped pointed posteriorly, pale brown and clothed with fine hair. Labium longer than wide, reddish brown, with the median notch at both sides. Maxillae narrow at proximal end and broader distally ; distal end provided with distinct scopulae. Chelicerae strong and stout, dark reddish brown, retromargin provided with four strong teeth. Legs long and strong, pale brown, coxae and femora broad. Male unknown.

Abdomen : Oval, pale brown, clothed with pubescence slightly pointed posteriorly. Dorsal median area provided with two pairs of sigillae as in fig. 9A. Ventrally four parallel rows of pale spots extending from the epigastric furrow upto the base of spinnerets. Epigyne as in fig. 9B. Internal genitalia as in fig. 9C.

Type-specimen : 1 ♀, in spirit (detached), deposited in National Collection of Zoological Survey of India, Calcutta, Regd. No. 1502/18.

Type locality : Little Andaman, Andaman Islands, Indian Ocean, India, 1931.

Distribution : Little Andaman, Andaman Island, Indian Ocean, India.

Remarks : Since Gravely (1931) has given a very scanty description of this species and the figures are also diagrammatic, we are redescribing this species in detail and providing the detailed illustrations including the internal genitalia which was not dealt by Gravely.

9. *Ctenus smythiesi* Simon

(Text-fig. 10)

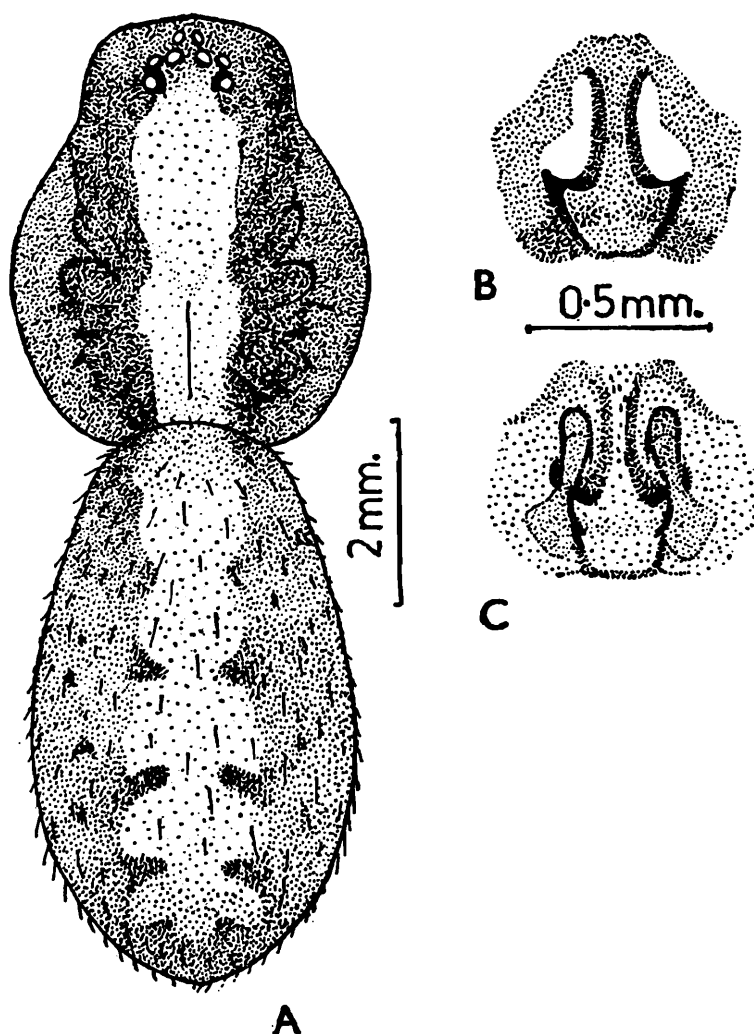
1897. *Ctenus smythiesi* Simon, *Mem. Soc. zool. Fr.*, **10** : 252-262.

1931. *Ctenus smythiesi* Gravely, *Rec. Indian Mus.*, **33** (3) : 213.

General : Carapace and legs brown, abdomen light brown. Total length 10.20 mm., Carapace 4.50 mm. long, 3.90 mm. wide ; abdomen 6.00 mm. long, 3.20 mm. wide.

Cephalothorax : Longer than wide, narrowing anteriorly, dorsal median area with longitudinal pale patch as in fig. 10A. Thin conspicuous fovea present in the thoracic region. Anterior medians and posterior eyes encircled with black patches as in fig. 10A. Thin brown streaks extend from near the fovea to sides and posteriorly. Sternum brownish yellow, clothed with spines. Labium slightly longer than wide, distal end pale with few spines. Maxillae white at the distal end and provided with scopulae. Chelicerae moderately stout and retromargin of fang furrow with four unequal teeth. Legs thin and long. Tibiae III and IV with three pairs of thin spines ventrally. Male unknown.

Abdomen : Oval, pointed behind, clothed with pubescence, mid-dorsally with a longitudinal patch extending the whole length as in fig. 10A. Irregular brown patches also present. Ventral side light coloured, clothed with pubescence. Epigyne as in fig. 10B. Internal genitalia as in fig. 10C.



Text-fig. 10.—*Ctenus smythiesi* Simon : A—Dorsal view of female, legs omitted, B—Epigyne, C—Internal genitalia.

Type-specimen : 1 ♀, in spirit in good condition, deposited in Museum National d 'Histoire Naturelle, Paris, France, Regd. No. 18665.

Type-locality : Dehra Dun, Uttar Pradesh, India.

Distribution : So far this species is known only from its type locality.

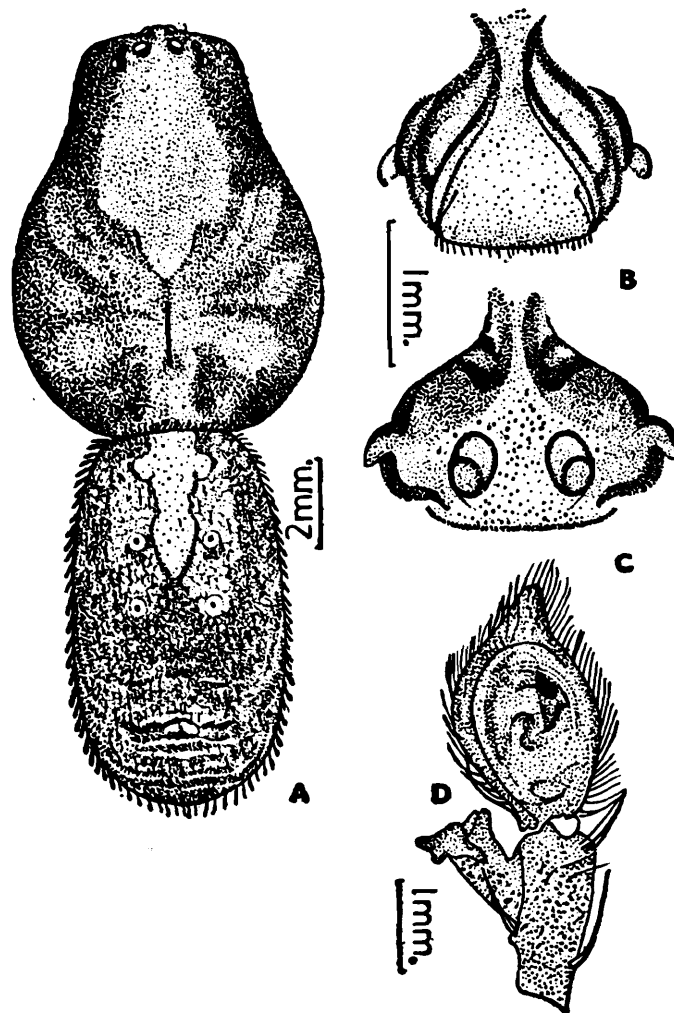
Remarks : The collector's name and date of collection is not mentioned in the label of type-specimen which we received from Museum National d 'Histoire Naturelle, Paris, France. We have cut the genitalia and kept it in micro vial alongwith the type specimen.

10. *Ctenus sikkimensis* Gravely
(Text-fig. 11)

1981. *Ctenus sikkimensis* Gravely, *Rec. Indian Mus.*, 33 (3) : 232.

General : Carapace and legs reddish brown, abdomen olive green. Total length 18.80 mm. Carapace 9.80mm. long, 7.20 mm. wide; abdomen 9.00 mm. long, 5.00 mm. wide.

Cephalothorax : Longer than wide, narrowing anteriorly, covered with pubescence, prominent fovea present on the thoracic area and brown streaks extend from it towards sides and posteriorly. Two dark brown patches present at the posterior end of carapace. Both rows of eyes recurved but anterior row strongly recurved so as to form



Text-fig. 11.—*Ctenus sikkimensis* Gravely : A—Dorsal view of female, legs omitted, B—Epigyne, C—Internal genitalia, D—Male palp.

three rows of eyes as in fig. 11A. Margin of clypeus with thin and long erect hair pointed anteriorly. Sternum heart shaped pointed posteriorly, brown, covered with hair, margins darker than the middle area. Labium longer than wide, dark brown distally. Maxillae prominent, distally broad and with scopulae, proximally with oval, light brown

area. Chelicerae strong, chocolate brown hair, retromargin of fang furrow with four teeth. Legs stout with spines and hairs. Tibiae of I and II with five pairs of stout ventral spines and tibiae III and IV with three pairs of stout ventral spines. Male palp as in fig. 11D.

Abdomen : Oval, clothed with pubescence, anterior mid-dorsally with a pale longitudinal patch as in fig. 11A. Mid-dorsally with two pairs of sigillae as in fig. 11A. Ventral side black with two parallel rows of white spots extending from epigastric furrow upto the base of spinnerets. Epigyne as in fig. 11B. Internal genitalia as in fig. 11C.

Type-specimen : 2 ♀♀ and 1 ♂ in spirit in good condition, deposited in National Collection of Zoological Survey of India, Calcutta, Regd. Nos. 1537/18 and 1503/18 respectively.

Type-locality : ♀, Ghumti, Darjeeling, Eastern Himalaya, (c. 1330 m.), India. Coll. F. H. Gravely, July 1911. ♂, Kalimpong, Darjeeling, Eastern Himalaya, (c. 200-1500m), India. Coll. Sutherland.

Distribution : India : Ghumti, Kalimpong, Single, Tindharia, Darjeeling, West Bengal ; Assam.

11. *Ctenus thorelli* Cambridge

(Text-fig. 12)

1897. *Ctenus thorelli*, Cambridge, *Ann. Mag. nat. Hist.*, (6) 20 : 342-344.

1931. *Ctenus thorelli* : Gravely, *Rec. Indian Mus.*, 33 (3) : 232.

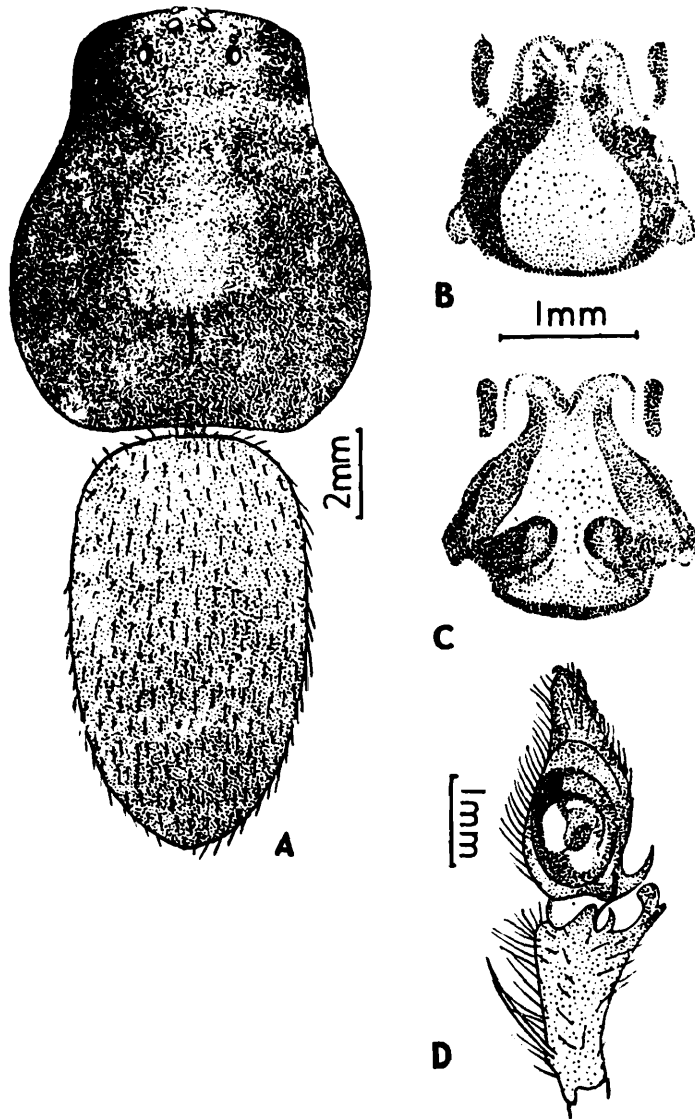
General : Carapace and legs dark reddish-brown, abdomen reddish-yellow. Total length 18.50 mm. Carapace 9.20 mm. long, 8.00 mm. wide ; abdomen 9.00 mm. long, 5.00 mm. wide.

Cephalothorax : Longer than wide, cephalic area shining, clypeus with few spines directed forward. A conspicuous fovea at the middle of thoracic region present, eyes dark in colour. Ocular area hairy as in fig. 12A. Sternum heart shaped, pointed behind, margins dark. Labium longer than wide, reddish brown. Maxillae broader and white distally and provided with conspicuous scopulae. Chelicerae black, strong, stout and hairy, retromargin fang furrow provided with four teeth. Legs stout, covered with hair and spines. Male palp as in fig. 12 D.

Abdomen : Oval, reddish yellow, clothed with pubescence. Two pairs of sigillae on dorsal middle area as in fig. 12 A. Ventral side brown with two pairs of longitudinal rows of white spots extending from the epigastric furrow to the base of spinnerets. Epigyne as in fig. 12B. Internal genitalia as in fig. 12C.

Type-specimen : 1 ♀ and 1 ♂ in spirit in good condition, deposited in British Museum (Natural History), London. Regd. No. 1518/18.

Type-locality : Sri Lanka, Coll. *Keyserling*.



Text-fig. 12.—*Ctenus thorelli* Cambridge : A—Dorsal view of female, legs omitted, B—Epigyne, C—Internal genitalia, D—Male palp.

Distribution : So far this species is known only from its type locality.

Remarks : This species is so far not recorded from India but we have included it in this work because it may be occurring in India.

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