

SOME INDIAN PROCTOTRUPOIDEA (HYMENOPTERA :
SCELIONIDAE)*

By

G. G. SARASWAT

School of Entomology, St. John's College, Agra

(With 6 Text-figures)

INTRODUCTION

The material was collected by Dr. M. S. Mani and party in the course of Field Surveys under support from PL-480 funds by the U. S. Department of Agriculture. The types of the new species are being retained for the time being in the School of Entomology, pending final disposal. I express my cordial thanks to Prof. M. S. Mani for placing this interesting material at my disposal, for valuable advice, and encouragement.

KEY TO SPECIES OF *MACROTELEIA*

- | | | |
|--|-----|--------------------------|
| 1. Body yellowish-brown to ferruginous-brown ... | ... | 2 |
| — Body dark honey brown to black ... | ... | 3 |
| 2. In female abdominal tergites 1, 5, 6 and 2 and 4 equal, 3rd largest ; in male 1, 5 equal and 3, 4 equal and longest ; <i>pm</i> more than 1.50 times <i>m</i> ... | | <i>M. indica</i> Sharma |
| 3. Body very long, 5.06 to 6.00 mm ; frons matt, punctate, slightly emarginately impressed and strongly, longitudinally keeled in the middle ; sublongitudinal striations: near the antennal sockets ... | ... | 4 |
| — Body short, less than 5.00 mm ; frons perfectly smooth, moderately deeply and emarginately impressed ... | ... | 5 |
| 4. In female abdominal tergites 1 and 5 equal, 2, 3, 6 equal and longest ; in male 1 and 5 equal, 2, 3, 4 equal and longest ; <i>pm</i> 2.00 or more than 2.00 times <i>m</i> | | <i>M. lamba</i> Saraswat |

* Contribution No. 266 from the School of Entomology, St. John's College, Agra-282002.

5. Body 4.66 mm ; eyes naked ; propodeum densely clothed with long setae ; in male abdominal tergites 1, 5 and 2, 4 equal, 3rd longest ; *pm* slightly more than 2.00 times *m*. ... *M. boriviliensis* sp. nov.
- Body 4.24 mm ; eyes very sparsely and very minutely pubescent ; propodeum finely, longitudinally striate ; in female abdominal tergites 2, 4, 6 subequal, 3rd longest ; *pm* slightly less than 2.00 times *m* ; fons transversely striate only near the keel ... *M. livingstoni* sp. nov.

1. *Macroteleia boriviliensis* sp. nov.

(Text-fig. 1)

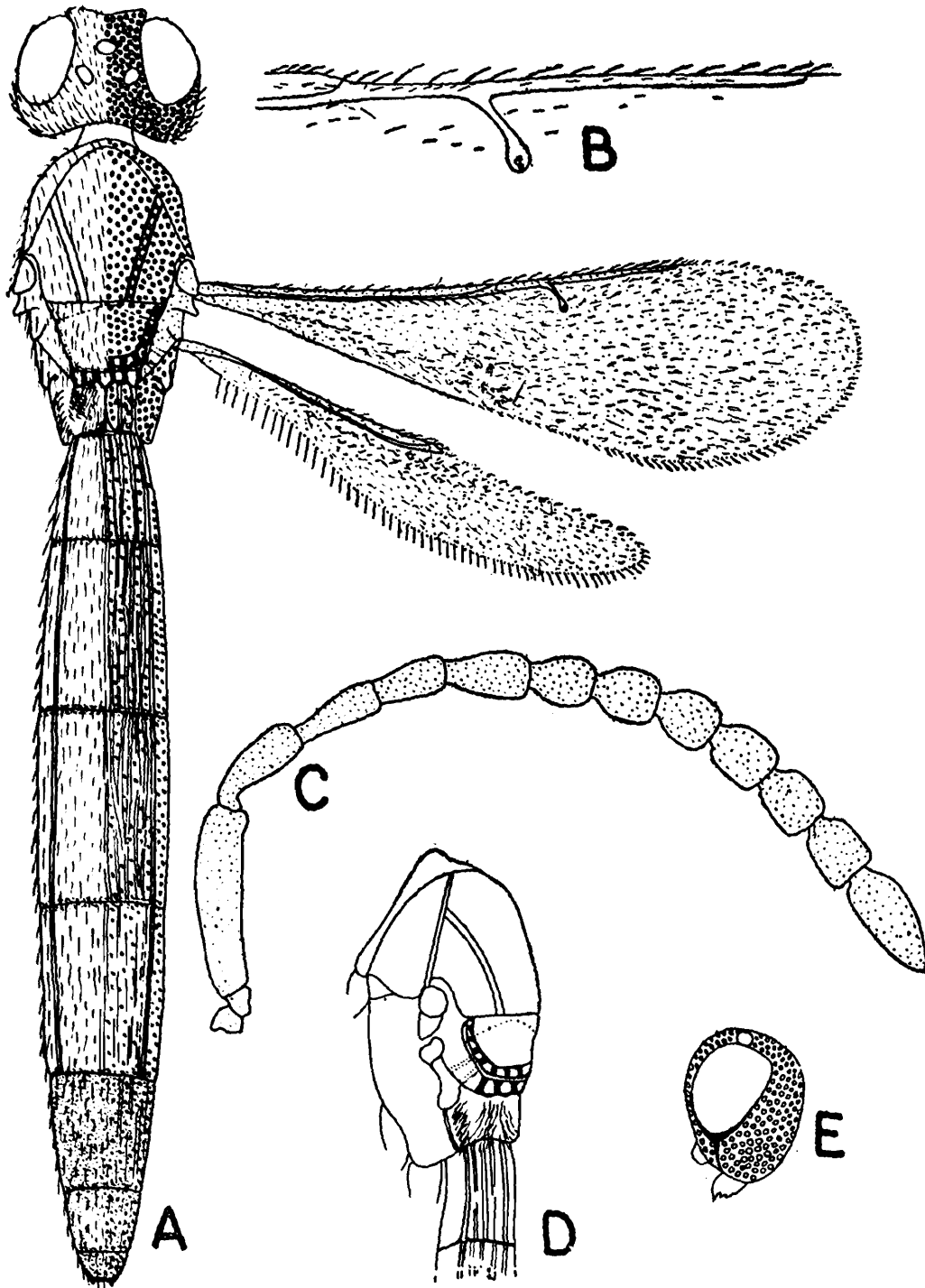
Male : Length of body 4.66 mm ; fore wing 2.72 mm ; hind wing 2.06 mm ; abdomen 3.14 mm. Body black, eyes and ocelli very dark brown, antennae dark brown, legs brown, wings subhyaline ; abdomen honey brown, last three tergites somewhat darker.

Head as wide as thorax ; viewed from above (Text-fig. 1 A) width to length 100 : 60, with large, deep and very close, setigerous punctae, the punctae separated by 0.50 to 1.00 of their own diameters ; ocellular space less than 0.50 of the ocellar diameter, front ocellar space 2.50 times the ocellar diameter, interocellar space 4 times the ocellar diameter ; eyes smooth with only few, very minute setae, eye length to head length 80 : 100 ; frons moderately deeply and emarginately impressed in the middle, smooth, without punctae ; mandibles tridentate ; genal carina (Text-fig. 1 E) present. *Antenna* (Text-fig. 1 C) 1.66 mm, segments 12, 1.1.0.9.1 ; scape 5.33 times longer than thick, slightly more than the following 2 segments combined ; pedicel 2.66 times longer than thick, 0.50 the scape ; first funicular segment subequal to pedicel and third segment ; second 1.66 times longer than thick, 0.70 the first ; segments 4-9 equal, 1.25 times longer than thick, 0.76 the third ; club not stouter than funicle, 2.25 times longer than thick, about 1.75 times the preceding segments combined.

Thorax (Text-fig. 1 A, D) : Mesonotum and scutellum punctate like the head, but the punctae not so close ; notauli complete, deep, with a row of large and shallow, non-setigerous, somewhat round depressions ; scutellum straight posteriorly, rounded at corners, posterior margin with a row of large, deep, rectangular depressions ; metanotum narrow with the posterior margin having medially a row of 5 strongly carinated, rectangular depressions ; propodeum densely clothed with silvery-white, long setae, concealing the longitudinal carinae. Hind metatarsus 0.78 the following tarsal segments combined. *Fore wing* (Text-fig. 1 A, B)

length to width 100 : 30, venation *sm* : *m* : *pm* : *st* 500 : 100 : 208 : 50 ; fore wing to hind wing (Text-fig. 1 A) length 100 : 75.

Abdomen (Text-fig. 1 A) : Seven segmented ; all tergites longitudinally striate with fine, sparsely scattered, setigerous punctae ; first tergite 1.10



Text-fig. 1. *Macroteleia boriviliensis* sp. nov. ♂ A. Body dorsal view, B. veins enlarged, C. antenna, D. thorax in profile, E. head in profile.

times longer than wide, equal to the fifth : second 1.34 times longer than wide, about 1.50 times longer than the first ; third longest, 1.50 times longer than wide, 1.16 times longer than the second ; fourth equal to the second, 0.88 the third : fifth 0.65 the fourth ; sixth

nearly as long as thick, 0.57 the fifth ; seventh 1.50 times thicker than long, 0.50 the sixth.

Holotype : Male on card, wings and one antenna of one side on slide, 4.13. Borivili : Bombay (Maharashtra). Coll. *M. S. Mani & party*, 25. ix. 1971.

2. *Macroteleia indica* Sharma

(Text-fig. 2)

1978. *Macroteleia indica* Sharma, In : Saraswat & Sharma, *Mem. Sch. Ent.*, 5 : 11, fig. 6.

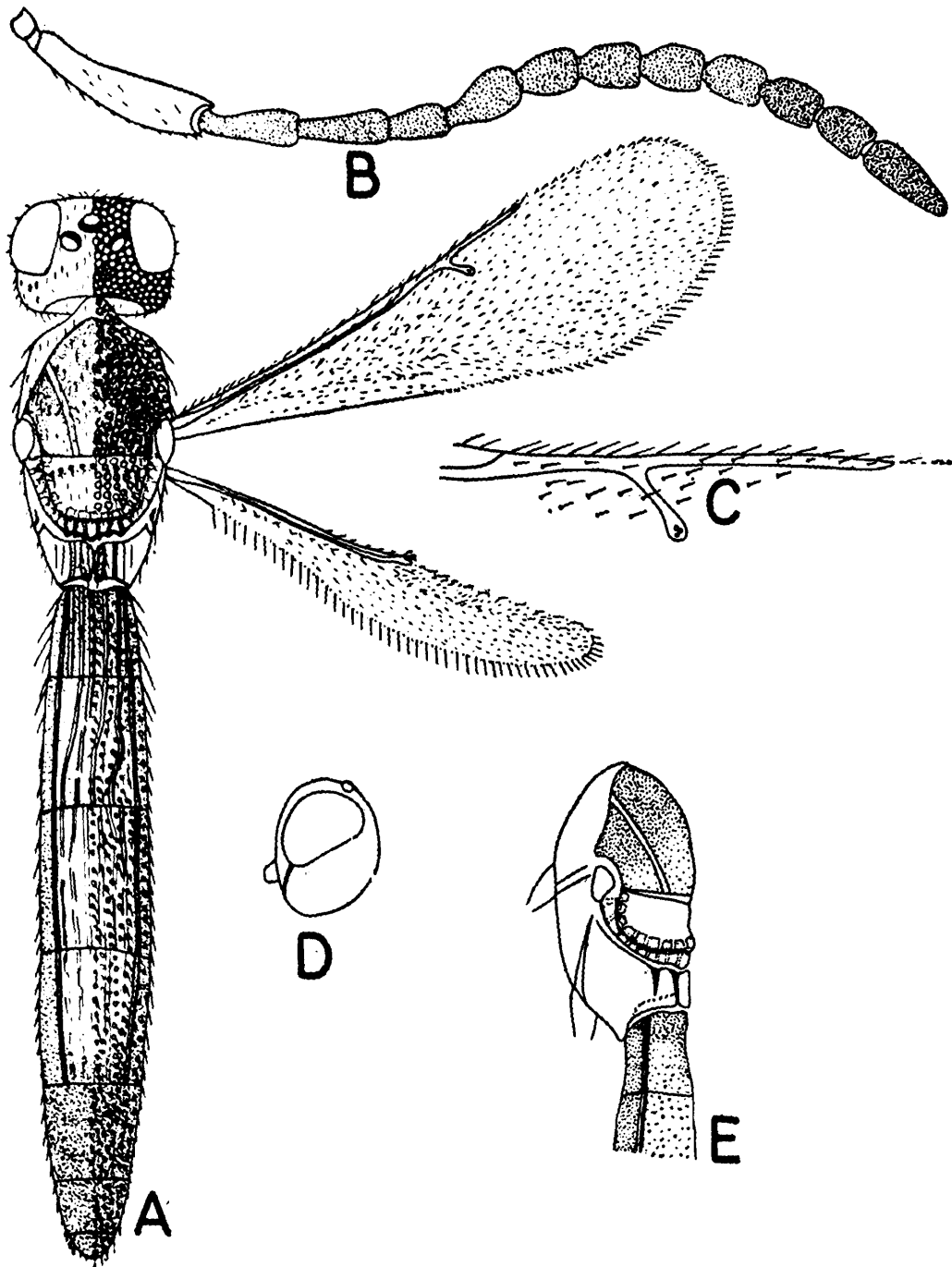
This species was originally described from females only. I have since come across a series of males which I am describing here.

Male : Body length 3.40-3.74 mm ; fore wing 2.22-2.34 mm, mean 2.29 mm ; hind wing 1.60-1.78 mm, mean 1.70 mm ; abdomen 2.08-2.42 mm, mean 2.29 mm. General colour of body ferruginous-brown ; eyes and ocelli black ; scape yellowish-brown, flagellum dark brown. Mesonotum black, wings hyaline. Abdominal tergites 5-7 and sometimes also the posterior region of the 4th tergite black, first and second tergites less black, other tergites laterally darker black.

Head as wide as thorax ; viewed from above (Text-fig. 2 A) width to length 100 : 67, with deep, close, setigerous punctae ; ocellular space 0.50 the ocellar diameter, front ocellar space 2.50 times the ocellar diameter, interocellar space 3.50 times the ocellar diameter ; eyes naked, very sparsely indistinctly pubescent, eye length to head length 75 : 100 ; frons slightly impressed ; genal carina (Text-fig. 2 D) present. *Antenna* (Text-fig. 2 B) 1.48 mm, segments 12, 1.1.0.9. 1 ; scape 4.33 times longer than thick, slightly smaller than the following two segments combined ; pedicel 3 times longer than thick, 0.57 the scape. First funicular segment longest and nearly equal to the third, 2.60 times longer than thick and 0.86 the pedicel ; second segment twice longer than thick, 0.76 the first ; third twice longer than thick, very slightly shorter than the first ; segments 4-9 equal, 1.66 times longer than thick, 0.83 the third. Club 2.66 times longer than thick, slightly shorter than the preceding two segments combined.

Thorax (Text-fig. 2 A, E) : Mesonotum with deep, large, close, setigerous punctae, the punctae more distinctly separated than on the head ; notauli complete, deep, with a row of large and shallow, non-setigerous depressions ; scutellum rounded behind, its anterior margin with a transverse row of fine punctae, posterior margin raised upwards with a row of very large, shallow, rectangular depressions ; metanotum

not as narrow as in other Indian species, smooth, with a single, large, tooth in the middle and a row of 3 strongly carinated rectangular depressions on either side of the median tooth; propodeum smooth, flat, plate-like, without bilobed structures in the middle, two strongly



Text-fig. 2. *Macroteleia indica* Sharma. ♂ A. body dorsal view, B. antenna, C. veins enlarged, D. head in profile, E. thorax in profile.

developed carinae on each side. Hind metatarsus 0.74 the following tarsal segments combined. Fore wing (Text-fig. 2 A, C) length to width 100 : 29, venation $sm : m : pm : st$ 482 : 100 : 182 : 54; fore wing to hind wing (Text-fig. 2 A) length 100 : 76.

Abdomen (Text-fig. 2 A) : Seven segmented; all tergites longitudinally

striate, with fine setigerous punctae, striations are very prominent particularly on the first two tergites ; first tergite as long as wide ; second 1.27 times longer than wide, 1.50 times longer than the first ; third longest, 1.37 times longer than wide, 1.13 times longer than the second ; fourth 1.31 times longer than wide, 0.96 the third ; fifth subequal to the first ; sixth 1.30 times thicker than long, 0.60 the fifth ; seventh 1.60 times thicker than long, 0.50 the sixth.

Material studied : 1 male on card, wings and antenna of one side mounted on slide, 20.11. Maldare Forest (Siddapur) : Karnataka ; 5 males on cards, 20.6. and 20.12. Walayar Forest (Coimbatore) : Kerala and Dubare Forest (Siddapur) : Karnataka. Coll. *M. S. Mani, G. G. Saraswat & S. K. Sharma*, 25.v.-1, 6.vi. 1978, 9-11.v. 1978 and 26.v.-4,7.vi. 1978.

This species differs very much from *M. boriviliensis* Saraswat in much smaller body, general colour and sculpture ; in proportions of antennal segments, hind metatarsus and abdominal segments ; posterior margin of scutellum broadly rounded.

3. *Macroteleia livingstoni* sp. nov.

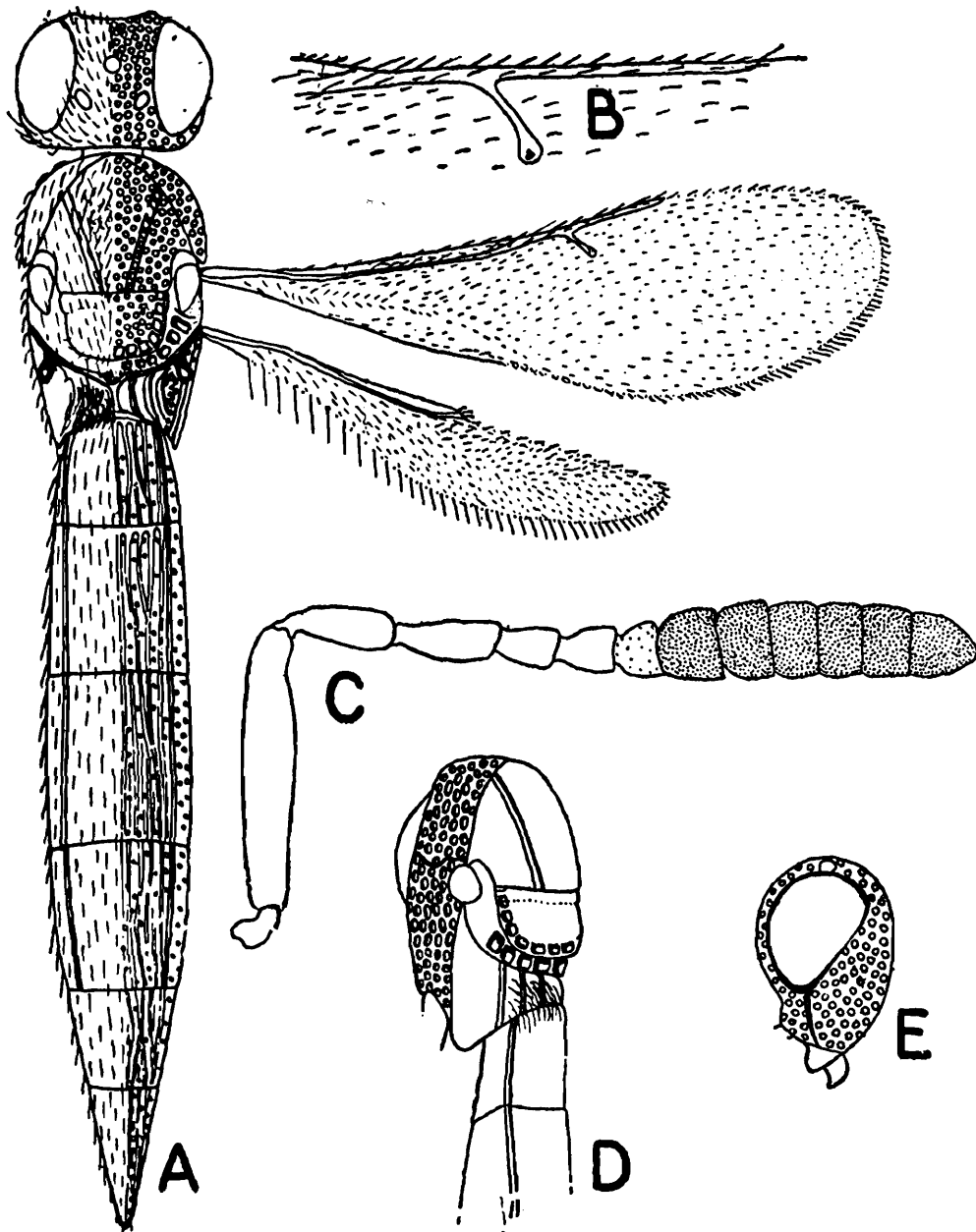
(Text-fig. 3)

Female : Length of body 4.24 mm ; fore wing 2.48 mm ; hind wing 1.80 mm ; abdomen 2.78 mm. Body black, eyes brown, antennae brown, club black, wings hyaline, legs brown.

Head : almost as wide thorax ; viewed from above (Text-fig. 3 A) width to length 100 : 72, with large, deep, close, setigerous punctae ; lateral ocelli almost contiguous with the eye border, front ocellar space 2.75 times the ocellar diameter, interocellar space 3.50 times the ocellar diameter ; eyes very sparsely and very minutely pubescent, eye length to head length 87 : 100 ; frons moderately deeply impressed, smooth, without punctae in the middle, emarginate, transversely striate only in the area just above the antennal sockets, median carina short in between the antennal sockets ; mandibles tridentate, middle tooth small ; genal carina (Text-fig. 3 E) present. *Antenna* (Text-fig. 3 C) 1.44 mm, segments 12, 1.1.0.4.6 ; scape 5.70 times longer than thick, subequal to following 3 segments combined ; pedicel 3.60 times longer than thick, 0.45 the scape. First funicular segment subequal to pedicel ; second 1.66 times longer than thick, 0.62 the first ; third equal to the second ; fourth 1.16 times thicker than long, 0.75 the third. Club stouter than funicle, first 5 segments transverse, sixth rounded at tip, club 4.40 times longer than thick, equal to the preceding 4.50 segments combined ;

first segment 1.25 times thicker than long, 1.33 times longer than the preceding segment ; second only very slightly shorter than the first ; segments 3 to 5 equal ; sixth as long as thick and 1.50 times longer than the fifth segment.

Thorax (Text-fig. 3 A, D) : Mesonotum and scutellum punctate as on vertex ; notauli complete, deep, with a row of large and shallow, non-setigerous depressions ; scutellum rounded at corners, posterior margin



Text-fig. 3. *Macroteleia livingstoni* sp. nov. ♀ A. body dorsal view, B. veins enlarged, C. antenna, D. thorax in profile, E. head in profile.

with a row of large, deep, rectangular depressions ; metanotum narrow with a single, large, median tooth, rectangular depressions as on scutellum ; propodeum finely, longitudinally striate, medially with bilobed areola very well developed, with fine setae, punctae invisible. Hind metatarsus equal to the following tarsal segments combined. *Fore wing*

(Text-fig. 3 A, B) length to width 100 : 29, venation $sm : m : pm : st$ 540 : 100 : 180 : 60 ; for wing to hind wing (Text-fig. 3 A) length 100 : 72.

Abdomen (Text-fig. 3 A) : All tergites longitudinally striate, with fine setigerous punctae ; punctae smaller, shallower than on thorax, sparsely scattered, separated from each other by 1 to 2 times the distance of their own diameter ; abdomen with 6 visible tergites, last tergite wedge-shaped, pointed ; first tergite as long as wide ; second only very slightly longer than wide, 1.20 times longer than the first ; third longest, 1.26 times longer than wide, 1.20 times longer than the second ; fourth 1.18 times longer than wide, 0.90 the third ; fifth nearly as long as wide, smaller than the first, 0.65 the fourth ; sixth equal to the second, 2.66 times longer than thick, 1.41 times longer than the fifth.

Holotype : Female on card, wings and antenna on slide, 20.6. Walayar Forest (Coimbatore) ; Kerala. Coll. *M. S. Mani, S. K. Sharma & G. G. Saraswat*, 9-11.v.1978.

This species differs from *M. indica* Sharma in much larger body ; general colour black and sculpture on head ; in different proportions of antennal segments ; in shorter scutellum and in $sm : m : pm : st$ ratio.

I have great pleasure in naming this species after my friend Dr. David Livingstone, Reader in Zoology, Madras University, who accompanied me in the field for collecting Proctotrupoidea.

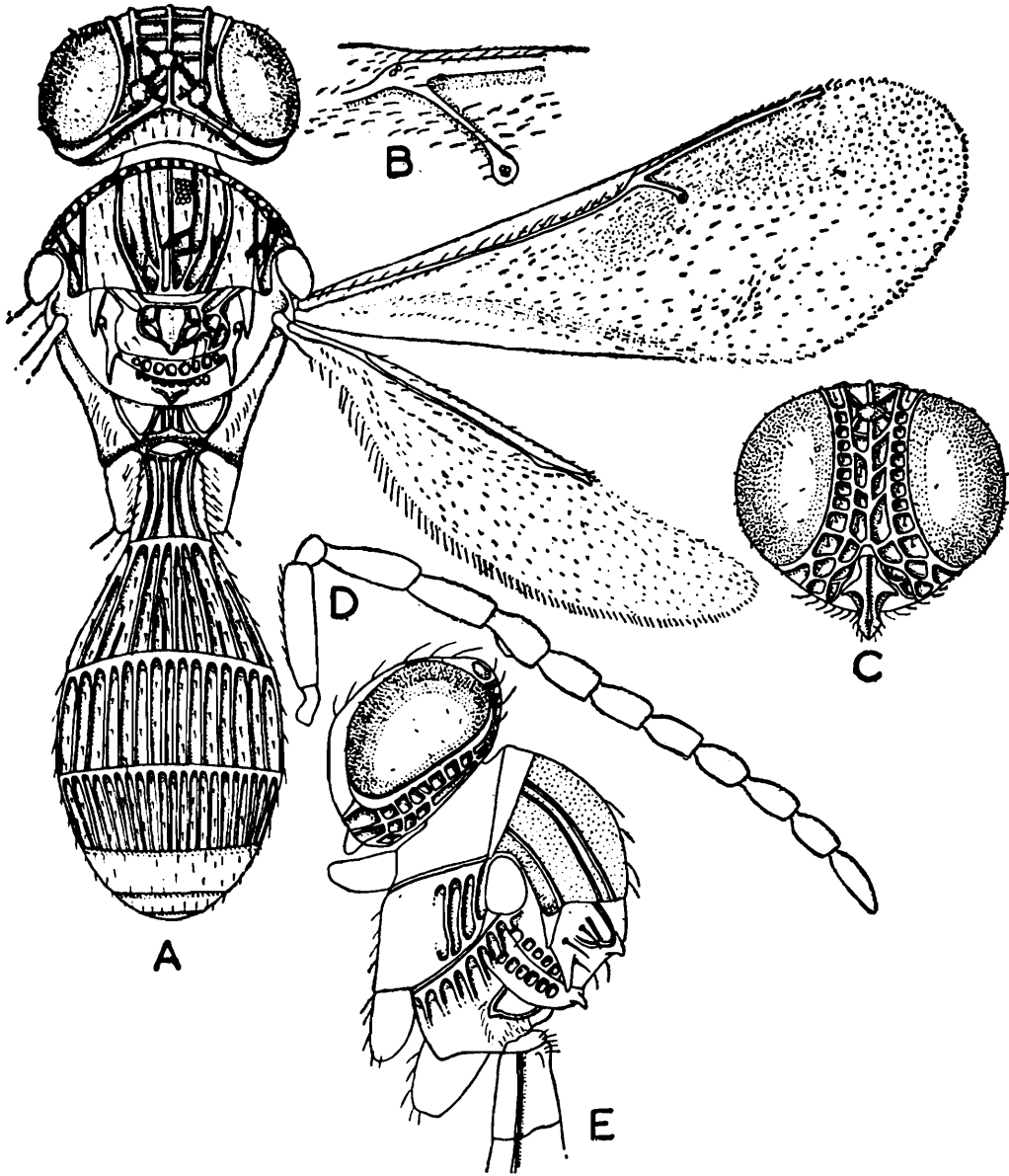
4. *Dichoteleas indicus* sp. nov.

(Text-fig. 4)

Male : Length of body 3.86 mm ; fore wing 3.00 mm ; hind wing 2.36 mm ; abdomen 2.06 mm. Body black, eyes very dark brown to black, ocelli brown, antennae dark brown, scape and pedicel yellowish-brown, wings infumated brown ; anterior part of mesonotum honey brown, otherwise thorax black.

Head almost as wide as thorax ; viewed from above (Text-fig. 4 A) width to length 100 : 54, posterior margin strongly carinated, 3 strong carinae start from the ocelli and extend in front the entire length of the head ; the middle carina extending further and united with the carina of posterior margin of vertex, sculpture as shown in figure ; ocellocular space 0.25 of ocellar diameter, front ocellar space equal to the length of lateral ocellus, interocellar space 2.00 times the ocellar diameter ; eyes very large, very sparsely, with few scattered fine hairs, eye length to

head length 90 : 100 ; viewed from front (Text-fig. 4 C) frons unimpressed, with very large, setigerous, rectangular areolate sculpture between 5 longitudinal rows of strong carinae ; genal carina (Text-fig. 4 E) present. *Antenna* (Text-fig. 4 D) 2.94 mm, segments 12, 1.1.0.9.1 ; scape 3.50 times longer than thick, subequal to following 2 segments combined ; pedicel 1.33 times longer than thick, about 0.30 the scape.



Text-fig. 4. *Dichoteleas indicus* sp. nov. ♂ A. bodydorsal view, B. veins enlarged, C. head in front view, D. antenna, E. thorax in profile.

First funicular segment longest, 3.20 times longer than thick, 2.66 times longer than pedicel ; second 2.54 times longer than thick, 0.87 the first ; third twice longer than thick, 0.85 the second ; segments 4-9 subequal, 2 times longer than thick, 0.83 the third ; club thinner than funicle, 3.25 times longer than thick, slightly shorter than the preceding 1.50 segments combined.

Thorax (Text-fig. 4 A, E) clothed with fine hairs ; mesonotum with fine, leathery sculpture ; notauli complete, deep, with carinate margins,

median longitudinal carina and other carinae between notauli strongly developed ; scutellum with a pair of long, anterior and posterior spines and one blunt, short, tooth in the middle, sculptures as shown in the figure ; metanotum narrow with a pointed, short, tooth in the middle ; propodeum with dense pubescence laterally, sculpture as in figure. Hind metatarsus 0.83 the remaining tarsal segments combined. Fore wing (Text-fig. 4 A, B) length to width 100 : 36, venation $sm : m : pm : st$ 77 : 3.50 : 42 : 11 ; fore wing to hind wing (Text-fig. 4 A) length 100 : 78.

Abdomen (Text-fig. 4 A) : Six segmented ; spatulate ; first 4 tergites longitudinally striate ; with fine setigerous punctae ; first tergite 1.23 times longer than thick ; second longest, 1.52 times wider than long, about 1.20 times longer than the first ; third twice wider than long, 0.92 the second ; fourth 2.44 times wider than long, about 0.80 the third ; fifth 4.37 times wider than long, 0.44 the fourth ; sixth narrow.

Holotype : Male on card, wings and one antenna on slide, 9.10. Moozhiar (Kerala State) : Cardamom Hills. Coll. *M. S. Mani & G. G. Saraswat*, 17-20. iv. 1973.

This species resembles *D. rugosus* Kieffer* in the body being black, matt ; nature of striations on head and thorax ; frontal impression absent ; two proximal antennal segments differently coloured ; scape subequal to following two segments combined ; pronotum invisible in dorsal view ; scutellum broadly rounded behind ; metanotum medially with a pointed, short, tooth ; wings infumated brown ; abdomen spatulate, slightly longer than rest of the body, but differs very much in the following respects : body shorter ; eyes not completely naked, ocellular space not equal to ocellar diameter ; eleventh antennal segment not about 3 times as long as thick, but only 2 ; notauli complete, deep with carinated margins ; scutellum with 4 spines and 1 short tooth in the middle ; pm not 2, but about 4 times as long as st ; hind metatarsus shorter than the rest of tarsal segments combined ; first 4 abdominal tergites differently sculptured ; T 1 longer than thick, T 2 less than 1.30 of T 1, T 4 shorter than T 1.

5. *Leptoteleia bengalensis* sp. nov.

(Text-fig. 5)

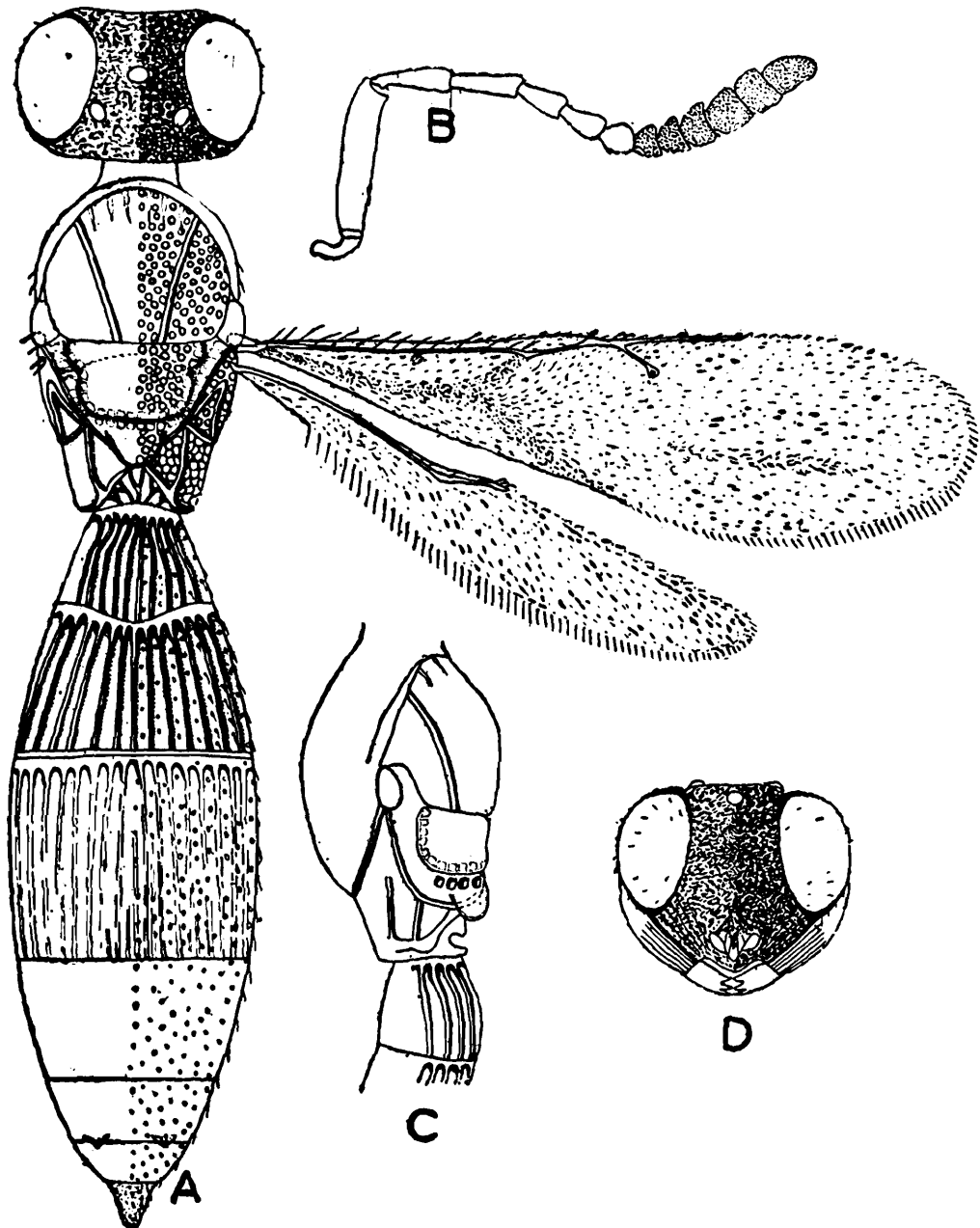
Female : Length of body 3.52 mm ; fore wing 2.28 mm ; hind wing 1.88 mm ; abdomen 2.10 mm. General colour of body ferruginous-brown ; head black, eyes blackish-brown, except black club antenna

*Kieffer, J. J. 1907. *Berl. Ent. Z.*, 51 : 297.

Kieffer, J. J. 1926. *Das Tierreich*, 48 : 885.

brown ; when compared to thorax abdomen dull ferruginous-brown, ovipositor sheath black ; wing hyaline.

Head wider than thorax (100 : 88) ; viewed from above (Text-fig. 5 A) width to length 100 : 61 ; vertex matt ; with fine, close, non-setigerous punctae ; occipital carina complete ; lateral ocelli contiguous with the eye borders, front ocellar space 2.00 times the ocellar diameter, interocellar space 3.66 times the ocellar diameter ; eyes very sparsely, finely



Text-fig. 5. *Leptoteleia bengalensis* sp. nov. ♀ A. body dorsal view, B. antenna, C. thorax in profile, D. head in front view.

pubescent, eye length to head length 90 : 100 ; viewed from front (Text-fig. 5 D) only slightly emarginately impressed in the middle, leathery sculpture as on vertex but without punctae, genal carina very well developed, genae very finely, longitudinally striate ; mandibles

tridentate. *Antenna* (Text-fig. 5 B) 1.40 mm, segments 12, 1.1.0.4.6 ; scape 5.14 times longer than thick, equal to following 2.50 segments combined ; pedicel 3.20 times longer than thick, 0.44 the scape. First funicular segment longest, only very slightly shorter than pedicel ; second twice longer than thick, 0.70 the first ; third equal to the second ; fourth subglobose, 0.60 the third. Club stouter than funicle, 4.66 times longer than thick, equal to preceding 4 funicular segments combined.

Thorax (Text-fig. 5 A, C) : Mesonotum with fine, shallow, large, setigerous punctae, separated from each other by about their own diameters, punctae on mesoscutum contiguous ; notauli complete ; scutellum matt, punctae as on mesoscutum ; metanotum very narrow, metanotal lamina rounded, horizontal and projected over the propodeum, with large and shallow punctae ; propodeum with 6 'Y'-shaped carinae in the middle and laterally with a strongly developed 'V'-shaped carina, very large, deep reticulations at the sides. Fore wing (Text-fig. 5 A) length to width 100 : 28, venation *sm* : *m* : *pm*. *st* 770 : 100 : 270 : 85 ; fore wing to hind wing (Text-fig. 5 A) length 100 : 82.

Abdomen (Text-fig. 5 A) : Seven segmented ; matt ; first 3 tergites longitudinally striate, tergites 4 and 5 distinctly punctate ; first tergite with a moderate hump, 1.30 times wider than long ; second 1.60 times wider than long, 1.25 times longer than the first ; third longest, 1.10 times wider than long, 1.50 times longer than the second ; fourth about twice wider than long, about half the third ; fifth 2.30 times wider than long, 0.62 the fourth ; sixth twice wider than long, 0.70 the fifth tergite ; seventh tergite distinctly visible ; ovipositor sheath extruded and sclerotized.

Holotype : Female on card, wings and one antenna on slide, 16.1. Alipur Duar : Hasimara (North Bengal Survey). Coll. *M. S. Mani, G. G. Saraswat & S. K. Sharma*, 1-19.iv.1976.

This species comes close to *Leptoteleia bicolor* (Harrington)¹ in having almost the same general colour of body ; head black ; tip of abdomen black, abdomen matt, longer than the rest of the body, third tergite quadrate but differs very much in the following respects : much longer body ; different proportions of antennal segments, only the club black, wings hyaline not weakly yellow, reach up to the hind margin of fourth abdominal tergite ; third tergite not smooth and shiny, but longitudinally striate, half of the third tergite and following tergites not black. This species runs to couplet 15 in Masner's² key and shares

1. (Harrington), 1899. *Canad. Ent.*, **31** : 79 (*Baryconus*).

Kieffer, J. J. 1926. *Das Tierreich*, **48** : 477.

2. Masner, L. 1978. *Canad. Ent.*, **110** : 353-380.

some characters with *L. verae* Masner and *L. marcelae* Masner and can be placed in between the two. It is close to *L. verae* Masner in having antennal clava 6-segmented; metanotal lamina semi-oval, almost horizontal, rounded posteriorly; notauli fine and quite distinct but differs in slightly smaller size of the body; metanotal lamina not notched medially; notauli not abbreviated anteriorly and head black in contrast to ferruginous-brown body. It resembles *L. marcelae* Masner in general appearance; sculpture; head black in contrast to ferruginous-brown body; presence of central keel running up from antennal insertion; metanotal lamina horizontal; but differs in much larger size of the body; metanotal lamina not subtriangular, not bisected into two halves; notauli present; antennal clava not pentamerous. This species comes under the *oecanthi*-group and the xanthic *marcelae* subgroup.

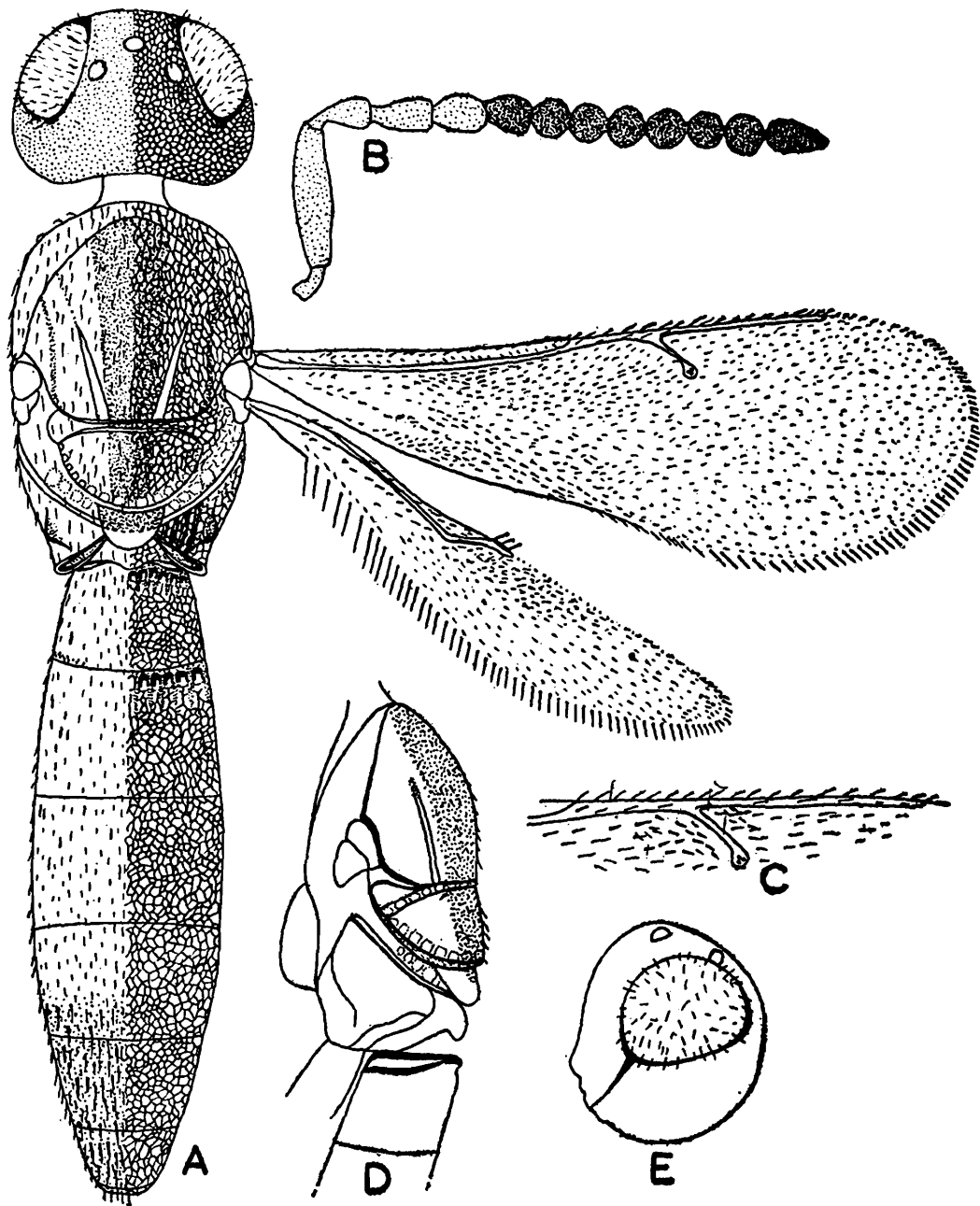
6. *Leptoteleia peninsularis* sp. nov.

(Text-fig. 6)

Male : Length of holotype 2.62 mm, length of other material examined 2.80 mm, mean 2.71 mm; fore wing 1.66-1.70 mm; hind wing 1.32-1.36 mm; head 0.36 mm; thorax 0.86-0.96 mm; abdomen 1.40-1.48 mm. Body dark brown to black; head black, eyes brown; scape, pedicel and first 2 funicular segments yellowish-brown, rest of antenna brown; thorax honey brown, mesoscutum and middle of scutellum black, scapula, sides of scutellum, metanotal lamina and propodeum, honey brown, legs yellowish-brown to brown, wings hyaline; abdomen largely black.

Head almost cubical; viewed from above (Text-fig. 6 A) width to length 100 : 72; vertex with fine, reticulate, leathery sculpture; occipital carina complete; ocellocular space 0.50 the ocellar diameter, front ocellar space 2.50 times the ocellar width, interocellar space 3.50 times the ocellar width; eyes very densely pubescent, eye length to head length 72 : 100; frons with a small, shallow, emarginate depression; head viewed from side (Text-fig. 6 E) genal carina very well developed. *Antenna* (Text-fig. 6 B) including radicle 1.24 mm, segments 12, 1.1.9.1, all antennal segments uniformly thick; scape 4.33 times longer than thick, including radicle only slightly less than the following 3 segments combined; pedicel 2 times longer than thick, 0.38 the scape. First 3 funicular segments long, 4-9 moniliform; first funicular segment longest, 1.83 times longer than thick, only slightly longer than pedicel; second and third equal, 1.33 times longer than thick, 0.72 the first; 4-9 equal, as long as thick, 0.75 the third. Club subconic, 2 times longer than thick, equal to preceding 2 funicular segments combined.

Thorax (Text-fig. 6 A, D) : Mesonotum and scutellum with larger, rugosoleathery sculpture than head. Thorax with fine pubescence, without punctae ; notauli incomplete, broader posteriorly and abbreviate anteriorly with a faintly indicated line, without parapsidal carinae ; scutellum semicircular behind with carinate margin ; metanotum narrow, produced into a large, horizontal lamina in the middle, lamina originates from



Text-fig. 6. *Leptoteleia peninsularis* sp. nov. ♂ A. body dorsal view, B. antenna, C. veins enlarged, D. thorax in profile, E. head in profile.

the anterior margin of metanotum and projects over the propodeum, its tip is translucent ; propodeum unarmed, posterior margin strongly carinate and elevate for fitting the first abdominal segment, a blunt tooth is present laterally on propodeum. Fore wing (Text-fig. 6 A, C) length to width 100 : 33, venation $sm : m : pm : st$ 327 : 100 : 172 : 54 ; fore wing to hind wing 100 : 80.

Abdomen (Text-fig. 6 A) : Seven segmented, elongate, broadly connected with the thorax ; first and second tergites largely longitudinally striate on anterior margins only, otherwise the entire abdomen with fine, rugoso-leathery sculpture ; abdomen 1.16 times longer than rest of the body. First tergite without hump, but lifted anteriorly into a blunt, tooth-like process ; first tergite 1.45 times wider than long ; second 1.35 times wider than long ; third equal to the second, only slightly wider ; fourth 1.54 times wider than long, slightly shorter than the third ; fifth 1.60 times wider than long, 0.77 the fourth ; sixth 1.66 times wider than long, 0.60 the fifth ; seventh rudimentary, strip-like.

Holotype : Male on card, wings and antenna on slide, 5.11. Parikatti Hill (Walayar Forest) : South India. Coll. *M. S. Mani & G. G. Saraswat*, 26. iii. 1972. *Other material examined* : One male on card, wings and antenna on slide, 9.2. Nilambur (Malabar) : South India. Coll. *M. S. Mani & G. G. Saraswat*, 3-4.iv.1973.

This species differs very much from *L. bengalensis* Saraswat in having smaller size of the body ; general colour ; body sculpture ; incomplete, abbreviate notauli ; different shapes of scutellum, metanotal lamina, propodeum and abdomen. This comes close to *L. martae* Masner* in general appearance ; general colour of the body ; colour of antennae ; sculpture ; emarginate, shallow frontal depression ; eyes with dense and long pilosity and fifth tergite being distinctly transverse, 1.60 times wider than long ; but differs in having larger size of the body ; notauli abbreviate anteriorly ; metanotal lamina much shorter ; dorsal propodeal carinae not parallel in their upper part ; fore wings reaching a little beyond the upper margin of the fifth abdominal tergite ; first tergite without hump. This species also comes under the *oecanthi*-group and the melanic *oecanthi*-subgroup.

7. *Opisthacantha bengalensis* Sharma

1978. *Opisthacantha bengalensis* Sharma, In Saraswat & Sharma, *Mem. Sch. Ent.*, 5 : 42-44, fig. 21.

I have before me two specimens of *O. bengalensis* Sharma from the same lot as originally described. Because the holotype and one paratype were mounted on slides it was not possible to sketch the body very accurately and to describe various structures. Since these two specimens are on cards, I add some points as supplement to the original description.

* Masner, L. 1978. *Canad. Ent.*, 110 : 353-380.

Male : Two males on cards, 16.1. Alipur Duar : Hasimara (North-Bengal Survey). Coll. *M. S. Mani & S. K. Sharma*, 1-19. iv. 1976. Length of body 2.06-2.32 mm ; fore wing 1.64-1.82 mm ; hind wing 1.40-1.50 mm ; abdomen 1.04-1.30 mm. General colour of body honey-brown ; eyes and bases of ocelli black ; wings subhyaline ; abdominal tergites 4-7 black.

Head as wide as thorax ; viewed from above width to length in the middle 100 : 50, vertex matt with few setae ; interocellar space 3.20 to about 4.00 times the ocellar diameter ; eyes finely pubescent ; frons with a small, shallow, emarginate depression in the middle, strongly keeled in the middle, sculpture as on vertex, genae longitudinally striate ; mandibles strong, large, curved, tridentate, middle tooth smaller. *Antenna* 1.88 mm, flagellum long, uniformly thick ; funicular segments 3-7 equal, 4 times longer than thick ; segments 8 and 9 equal, 3.50 times longer than thick.

Thorax viewed dorsally, metanotum broadly, medially expanded to form a semihorizontal, smooth, flat, subtriangular plate ; lateral margins of the plate straight with rounded corners ; middle tooth strongly developed, pointed and ridged in the middle ; viewed laterally, metanotal tooth projects out beyond the general surface of thorax ; postero-lateral margin of propodum with 'Y'-shaped carina ; fore wing length to width 100 : 36, venation *sm* : *m* : *pm* : *st* 1025 : 100 : 375 : 150.

Abdomen with 7 tergites, flattened, elongate spatulate, finely reticulate, reticulations very prominent on 4-7 tergites, clothed with fine setae ; tergites 4-7 slightly ridged in the middle ; tergites 1-6 in the ratio of 9 : 14 : 15 : 9 : 5 : 2.

SUMMARY

This paper contains descriptions of two new and one already known species of *Macroteleia*, one new species of *Dichoteleas* and two new species of *Leptoteleia*. Supplementary notes are added to *Opisthacantha bengalensis* Sharma. The two genera *Dichoteleas* and *Leptoteleia* are being recorded for the first time from India.