SECTION C

TAXONOMY
The Taxonomy of Oriental Reduviidae is less attempted, since Taxonomy, as a Science, has not been successful in research laboratories seeking sophisticated technology as a means of promoting Scientific interest. For that reason, the collections placed in several reputed institutions, or repositories, both national and private, tend to be left uncared for in a most dilapidated condition. The present study is an attempt to redescribe the already known species whose original descriptions are fragmentary and to record their presence in various locations for a future work on Zoogeographical distribution of species. It is also a natural interest in describing new species and to establish a repository for this group of Insects for posterity.

In this attempt it is worthwhile to quote the following after Wygodzinsky (1966) the expression of McAttee and Malloch (1925) as a basic principle for taxonomic work, "There has been no greater retarding factor in Systematic Entomology than that of grafting supplementary work here and there upon the old, of using the characters and methods that have been used instead of seeking something of greater significance. Each new piece of synoptic work should penetrate as much further into the heart of things as possible, judiciously noting and using, but neither copying nor worshipping previous contributions to the study".

For every subfamily of Reduviidae Distant (1904 & 1910) employed specific characters for broad diagnosis. The erection of divisions in almost all subfamilies provides very useful guidelines to place a genus approximately. Such an attempt was made by the studies
of the materials available with Distant then. This is evident by the fact a large number of subfamilies have been subsequently erected while revising the taxonomy of the Reduviidae of Oriental Region alone. Therefore, restriction of the number of subfamilies in the present study may apparently suggest adoption of Distant's estimation and may even suggest plesiomorphy in Taxonomy. However, after having studied various characters of all available species of Reduviidae of this region, it is found that Distant's enumeration of the subfamilies of the Reduviidae of this region is after all simple and comprehensive and therefore no attempt has been made to complicate the same by meaningless fragmentation.

In their attempt to revise the various subfamilies and genera of Reduviidae China and Miller (1959) made very drastic changes and recognised 29 subfamilies excluding Phymatinae and Elasmodeinae. This fragmentation was subsequently questioned by Carayon et al (1958), Wygodzinsky and Usinger (1960) and Usinger and Wygodzinsky (1964). Later on, Davis (1966), on the basis of male genitalia reassessed the earlier classification and further identified 31 subfamilies including the subfamily Phymatinae.

The Division of the Reduviidae of this region or any other region into two major divisions, namely, Tibiaroliate and Non-tibiaroliate, appears to be quite logical. The exceptions that do not conform to this division are however, confirmed by other characters. The other characters include segmentation of the antennae; morphology of the cranium; presence or absence of ocelli; relative length of the rostral
segments; architectural patterns of the pronotum; Pygophore spine, the parameres and the spinosity of the fore and mid femora. The colouration inevitably contributes immensely to the determination of the species in most cases. Therefore, in the present taxonomic account such characters have been precisely accommodated in the redescriptions of the already described species and new descriptions have been given a more generous detailing of characters.

The key for the various subfamilies genera and species have been prepared with considerable care, not overlooking most of the salient diagnostic morphological characters. However, the genitalia have not been taken into account for formulating the key.
KEY TO THE SUB-FAMILIES OF THE TIBIAROLIATE GROUP OF REDUVIIDAE
OF SOUTHERN INDIA

All with tibiarolium on both the fore and mid tibiae or rarely on the fore tibiae alone.

more

1. Antennal filament with never/than two segments; scutellum not truncated but either tuberculate or spinous; apterous or alate. .... .... ..... 2

Antennal filament, with rare exceptions, almost always with more than two segments; scutellum always truncated but never spinous; mostly apterous or brachypterous; if alate, males alone winged. ..... .... ...

... Ectrichodiinae Stal

2. Pronotum laterally either smooth or with longitudinal or oblique sulcations and carinations; scutellum spinous or tuberculate or bare; tarsomeres invariably three .... 3

Pronotum invariably tuberculate; scutellum with or without spine; abdomen with or without spines; tarsomeres invariably two; either alate or apterous .... .. Salyavatinae Stal

3. Pronotum laterally invariably smooth or rarely sulcated and carinated; scutellar spines rarely present, but if present not robust; alate or apterous .... .... .... 4
Pronotum invariably with longitudinal or oblique sulcations and carinations; scutellum always spinous, spines mostly robust; either alate or apterous. ... Acanthaspidinae Stal

4. Pronotum invariably with lateral longitudinal sulcations and carinations; scutellum tuberculate or spinous; head mostly transverse or rarely elongate with deep fissure between eyes; mostly apterous or brachypterous and rarely alate ..... ..... ..... Piratinae Stal

Pronotum invariably smooth or granulate, head longitudinally elongate; scutellum neither tuberculate nor spinous; always alate ..... ... .... Triatominae
CHAPTER - II

Sub-Family : ACANTHASPIDINAE

Acanthaspidina, Stal, En. Hem. iv, P. 4 (1874)

This large sub-family of the Reduviidae differs principally from the Salyavatinae in having the anterior tarsi three jointed. Other characters are similar to those of Salyavatinae and they include the following:- hemelytra without the large areola, interior area of membrane longer than exterior area, anterior tibiae generally with tibiolarium and the scutellum sub-triangular, its apex spinously produced.

The sub-family Acanthaspidinae was erected by Stal (1874). Distant (1904) recognised six divisions including Conorhinaria (Triatoma). The division Acanthaspisaria was considered to differ from Reduviaria by the smallness in the size of their eyes and in having a pronotum not broadly longitudinally compressed or sulcate. The Acanthaspisaria constituted the major division, comprising of 5 genera (Pasira, Pasiropsis, Acanthaspis, Inara and Edocla) and the genus Acanthaspis is represented by the largest number of species with too many diagnostic features. China and Miller (1959) and subsequently Davis (1966) removed Acanthaspidinae and replaced it by Reduviinae. But since the characters of the genus Acanthaspis are considered to represent the major diagnostic characters than those of Reduvius, the author in the present discourse prefers to retain the nomenclature Acanthaspidinae in order to diagnose all the species having such common characters.

While describing 43 species of the genus Acanthaspis, Distant (1904 & 1910) considered the characters such as antennal length, its colour, length of the rostral segments, their spots, architecture of the
two pronotal lobes, pattern of colouration of legs and distribution of spots on the various areas of the body, namely the pronotum, hemelytra and connexivum as their diagnostic features. Since the tibiarolium in both fore and mid legs are present uniformly in all the species of this genus, this character was not considered as a principal diagnostic feature at all. On the basis of the length of the antennae, Distant divided the genus *Acanthaspis* into two major divisions, the first one having the first joint of antennae passing the apex of head, the second one not passing the apex of the head.

In the present taxonomic studies, all the morphological characters have been found to be useful for a preliminary diagnosis of the various species, with considerable reservation, since several species which were earlier deemed to qualify for species status are now designated as ecotypes (Ambrose & Livingstone, 1987). However, in the present investigation a fair treatment has been given to all the so-called 'morphs', taking into consideration Distant's veracity of species diagnosis of this genus.

One of the uncertainties in the description of Distant is the treatment given to the description of *A. pedestris* which he had declared as an immature form. In the present observation all the samples of *A. pedestris* collected from various locations comply with the description given by Stal and they are indeed confirmed characters of the adults. The immature stages of this species having entirely different characters namely total absence of ocelli, constant composition of the tarsomeres, being restricted to two and the characteristic nymphal chaetotaxy.
REDESCRIPTIONS

Genus: ACANTHASPIS

Platymeris, part, Burmeister, Handb. ii, 233 (1835).
Acanthaspis, Amyot and Serville, Hem, P. 336 (1843).
Stal, Hem. Afr. iii, PP. 122 and 126 (1865).
Stal, En. Hem. iv, P. 65 (1874).
Tetroxia, Amyot and Serville, Hem, P. 334 (1843).

Type: A. flavoraria Hahn, a Javan species, confused with A. sexguttata Fabricius by Amyot and Serville.

Distribution: Oriental and Ethiopian Regions.

Body oblong-ovate, head oval or oblong; ante and post ocular areas generally about equal in length; rostrum with the first and second joints variable in length, usually about equal in length; pronotum constricted before middle, in some few instances behind middle, anterior lobe without spines, posterior lobe sometimes discally spined and usually with the lateral angles prominent either as spines or tubercles; carinations and sulcations of the anterior lobe very conspicuously displayed; scape slender and elongate; scutellum with the apex longly spinously produced and generally obliquely ascendant; tibiolarium invariably present, anterior femora moderately incrassated, unarmed, posterior tarsi with the second joint longer than the third.
Total number of Species recorded by Distant from Orient ..... 43
Total number of Species known from India ..... 30
Total number of Species recorded earlier from Southern India ..... 9
Total number of Species recorded for the first time from Southern India in the present account ..... 12
Total number of Species described new to Science in the present account ..... 5


Male: (S.No. 1) Length 15 mm, width across the abdomen 6 mm; apterous; ovate; fuscous-testaceous or piceous brown; legs and antennae brownish ochraceous; second joint of antennae and the tarsi very pale ochraceous, head with a large spot at base and lateral areas behind eyes; two central series of spots to abdomen above and spots to connexivum above and beneath testaceous; frontal process deeply cleft in the middle; first and second rostral segments subequal in length; scape as long as head; anterior lobe of pronotum strongly sculptured with longitudinal sinuous carinations and sulcations more than twice as long as the rugulose posterior lobe; discal prominence of posterior lobe with an obscure tubercle on either side of the median longitudinal furrow, pronotal anterolateral angles obscurely tuberculate; scutellar tubercles obliquely turned upward; second abdominal segment with a longitudinal carina on either side of a median lobe; abdomen very broad; fore and mid tibiae with tibiarolium extending almost ⅓ their length, fore and mid femora slightly incrassated.
While reproducing the original description of Stal, Distant doubted its validity and considered this species as an immature form since this was the only apterous species of Acanthaspis which he had listed in the Fauna volume. Villiers (1973) in his check list of the African species of Acanthaspis included A. pedestris Schouteden. Probably both are the same species.

Previous Record: Madras (British Museum).

Present Record: Tamil Nadu: Aliyar (300), Anakatti (500), Periakalandai (350), Mettupalayam (400), Mathukkarai (300), Kangayam (250), Maruthamalai (500), Malumitchampatti (300), Chandrapuram (350), Kovai pudur (400), Pollachi (300), Walayar (200), Maruthuvamalai (50), Kalakad (300), Servalar (200), Manimutharu (100), Courtallam (350), Alagar Kovil (350), Vaigaidam (250), Tanjore (100), Tambaran (50), Chengleput (100), Sattanur Dam (150), Tiruvannamalai (100), Sathuvacheri (200), Vandavasi (75), Natayaneri (300), Narthamalai (200), Malayalapatti (250), and Annamangalam (250).

Acanthaspis siva Distant, Fauna of British India, including Ceylon and Burma, Rhynchota, Vol. II, P. 265 (1904).

Male: (SNo. 2) Length 20 mm, width across the abdomen 6 mm; oblong; macropterous; black or dark piceous; pilose; corium with a basal angular and a subapical irregularly rounded creamy white spot; membrane apically creamy-white, enclosing a fuliginous spot; connexivum above and beneath spotted with pale ochraceous; scape black as long as head, strongly pilose; remaining joints brownish ochraceous; frontal median foveation deep, frontal process apically converging...
as a tuberculate process at the base of antennae; rostrum with the first joint slightly longer than second; pronotum with the anterior lobe moderately sculptured, posterior lobe rugulose; centrally distinctly sulcate, lateral angles dentately produced and recurved; disk unarmed; scutellar spine obliquely ascendant; legs strongly pilose; fore and mid legs tibiaroliate.

Previous Record: North Central Provinces (Coll. Distant).

Present Record: Tamil Nadu: Bharathiar University (450), Siruvani (450), Aliyar (300), Walayar (200), Topslip (1000), Ulakkai Falls (250), Servalar (200), Courtallam (350), Alagar Kovil (350), Vaigaidam (250), Point Calimere (50), Tambaram (50), Sattanur Dam (150), Sathuvacheri (200), Bhavanisagar (300) and Masinagudi (950). Kerala: Kallar (175) and Sabarimalai Temple (600).

Acanthaspis trimaculata Reuter, Rev. d'Ent. vi, P. 157 (1887).

Female: (S.No. 3) Length 22 mm, width across the abdomen 7 mm; elongate; macropterous; black or piceous with tinge of red; fuscousely longly pilose; a large transverse, anteriorly medially excised spot to posterior lobe of pronotum and a some what round ochraceous spot behind middle of corium; a large subapical spot to membrane, its apex emarginate, white; testaceous spots to connexivum; anterior lobe of pronotum globose and sculptured, a little shorter than posterior lobe, which has its disk unarmed; posterior lobe transversely broadly rugulose, the posterior lateral angles prominent, shortly dentately produced, their apices suberect; scutellum piceous with reddish tinge, apical
spine slightly ascendant; rostrum with the first joint a little longer than the second; legs unicolourous, black with reddish tinge; fore and mid tibiae with tibiarolium extending almost up to the middle.

**Previous Record**: "Northern India" (Coll. Signoret), Bombay (Leith); Bor Ghat (Dixon).

**Present Record**: Tamil Nadu: Alagar Kovil (350), Courtallam (350), and Siruvani (450).


**Female**: (S.No. 4) Length 23 mm, width across the abdomen 6.5 mm; elongate; macropterous; black; posterior lobe of pronotum with two rounded basal spots; corium with a small basal spot and a larger rounded subapical spot; spots to connexivum above and beneath; apices of femora, two broad annulations to tibiae, and the tarsi luteous; first two segments of the rostrum subequal in length; scape as long as the head; frontal anterior process acutely pointed in between the base of the antennae, and medially grooved; pronotum with the anterior lobe moderately sculptured, globose; posterior lobe transversely rugulose, posterior angles dentately produced, their apices slightly recurved; scutellar spine obliquely ascendant and densely pilose; genital segments dorsally luteous.

**Previous Record**: Sikkim and Berhampore (Atkinson Coll. Brit. Mus.)

**Present Record**: Tamil Nadu: Siruvani (450), Courtallam (350), Alagar Kovil (350), and Madras (0).
Acanthaspis tergemina Burmëister, (Platymeris), Handb. ii, P. 233 (1835); Blanchand (Reduvius), Hist. Ins. iii, P. 104 (1840); Stal, Ent. Hem. iv, P. 73 (1874).

Male : (S.No. 5) Length 18 mm, width across the abdomen 6 mm; macropterous; oblong; black; basal joint of antennae, four basal spots and lateral angles to posterior lobe of pronotum, spots to connexivum above and beneath, apices of femora, two broad annulations to tibiae and base of posterior joint of tarsi, luteous; corium and its basal angle luteous, a transverse angulated and sinuated subapical spot creamy-white; apex of membrane greyish, enclosing a fuscous apical spot; first joint of rostrum a little longer than second; first joint of antennae a little shorter than head; pronotum with the anterior lobe moderately sculptured, subglobose; posterior lobe transversely rugulose, lateral angles shortly dentately produced; posterior disk unarmed; scutellar spine obliquely ascendant, densely pilose.

Previous Record : Madras (Coll. Distant); Ceylon (Green & Lewis); Trincomali (Brit. Mus.); Burma: Karennee, Palon, Teinzo (Fea).

Present Record : Tamil Nadu: Siruvani (450), Courtallam (350), and Alagar Kovil (350).

Acanthaspis sexguttata Fabricius (Reduvius) Syst. Ent. P. 832 (1775); Fabricius, Mant. ii, P. 312 (1787); Stal. Hem. Fabricius, i, P. 124 (1868); Stal En. Hem. iv, P. 73 (1874); Distant, A.M.H.N. (7), x, P. 184 (1902). Cimex edleri, Gmelin, Syst.Nat. 1, iv, P. 2199 (1788).
Male : (S.No. 6) Length 17 mm, width across the abdomen 7 mm; macropterous; elongately ovate; piceous; fuscously pilose; posterior pronotal lobe with four transverse spots and the apices of the lateral angles testaceous; corium with a sub-basal and a longer somewhat rounded subapical spot, also a large apical spot to membrane, dull greyish-flavescent; the membranal spot containing an apical fuscous spot; femora annulated near apex and tibiae biannulated with testaceous; pronotum with the anterior lobe distinctly sculptured, posterior lobe transversely rugulose, centrally sulcate, lateral angles dentately produced, their apices recurved, disk unarmed; first segment of the rostrum a little longer than second; first segment of antennae about as long as head; membrane not passing the abdomen; scutellar spine obliquely ascendant and densely pilose.

Previous Record : Mysore; Bangalore (Coll. Distant).

Present Record : Tamil Nadu: Siruvani (450), Courtallam (350) and Alagar Kovil (350).

Acanthaspis quinquespinosa, Fabre-cius (Reduvius), Spec. Ins. ii, P. 382 (1781); Fabre-cius, (Reduvius), Mant. ii, P. 313 (1787); Wolff (Reduvius), Ic. Cim. i. P. 39 (1800); Stal, En. Hem. iv, P. 72 (1874).

Male : (S.No. 7) Length 18 mm, width across the abdomen 5.5 mm; macropterous; oblong; black; the four posterior spines to pronotum, two lateral, two discal and their areas, a basal and a transverse discal spot to corium and spots to connexivum above and beneath luteous; legs and antennae castaceous; scape as long as head but shorter than the
pedicel; first two joints of the rostrum subequal; frontal region of head slightly porrect; anterior lobe of pronotum much smaller than posterior lobe and rounded, dorsal foveations shallow, anterolateral angles slightly tuberculate; posterior lobe transversely rugose; disk posteriorly convex with a long lateral spine on each side and with two shorter erect discal spines between them; scutellar spine long, obliquely ascending.

**Previous Record**: Assam: North Khasi Hills (Chennell), Margherita (Doherty). Bengal; Ranchi (Irvine). Bombay (Leith), Bor Ghat (Dixon). Ceylon (Green) and Burma, Palon (Fea).

**Present Record**: Tamil Nadu: Anakatti (500), Maruthamalai (500), Kovaipudur (400), Vadavalli (450), Maruthuvamalai (50), Vandalur (50), Tambaram (50), Cheyyar (75), Vandalasi (75), Tiruvhanni (150), Malayalapatti (250), Annamangalam (250), Puliancholai (300), Hogenekkal (300) and Krishnagiri (450).


**Male**: (S.No. 8) Length 17 mm, width across the abdomen 6 mm; macropterous; oblong'; piceous; antennae, posterior area and lateral angles of pronotum, basal angles and a large transverse spot beyond middle of corium, spots to connexivum above and beneath, rostrum, legs, central ridges to abdomen and apex of scutellar spine luteous; light brown spot at the post genal area; rostrum with the first two
posterolateral margins of posterior lobe faintly carinated; prosternal tubercles one on either side of the stridulatory groove prominently present as rounded knobs; posterior lobe transversely elongate, slightly narrowing posteriorly with the median foveation continuing posteriorly as small groove; posterolateral prominence with sharply pointed and upwardly curved spine; lateral margins with black long bristles and dorsally rugulose; scutellar spine bearing a few bristles very elongate, slightly lifted obliquely upward; the scutellum faintly foveated mid dorsally; the first abdominal segment with short spinous process at the connexivum; femora ochraceous but apically piceous; entire tibiae and tarsomeres ochraceous.

Previous Record: Kashmir (Hiigel); Ootacamund (Atkinson Coll. Brit. Mus.); Sangli (Bredd).

Present Record: Tamil Nadu: Coimbatore (500) and Vaigai Dam (250).


Female: (S.No. 10) Length 18 mm, width across the abdomen 6 mm; oblong; macropterous; piceous; posterolateral angular areas of pronotum, a large transverse spot beyond middle of corium, spots to connexivum above and beneath, and legs luteous; frontal process slightly lifted up in front of the antennal base; first two joints of rostrum
subequal; scape about as long as head; pronotum with sulcate disk; discal spines projecting prominently backward; pronotal anterior lobe tuberculate bordering the foveations; anterior lobe strongly sculptured, posterior lobe finely rugulose posteriorly, lateral angles spinously produced and recurved; scutellar spine obliquely ascendent and recurved.

Previous Record: Bombay (Leith); Madras (Coll. Distant); Ceylon; Peradeniya, Chilarw (Green).

Present Record: Karnataka: Talacauvery (1200).


Female: (S.No. 11) Length 14 mm, width across the abdomen 6 mm; macropterous; ovate; obscurely fuscous; longly palely pilose; scape, a small spot on the postocular area of the head, dorsal area of the collar, carinae of the anterior lobe of pronotum, the entire posterior lobe, anterolateral angles, its median sulcation, apex of scutellum, subcostal vein, fascia continuing upto the third part from apex and dilating internally near membrane, quadrangular spots to connexivum, discoidal fascia to abdomen beneath not reaching apex, prosternal marginal acetabular spots, and bands of the legs, palely flavescent; antennae inserted dorsally at the level of the middle of the eyes, scape annulated; pedicel ochraceous, apically piceous, almost twice as long as the scape; frontal process prominently forked porrectly protruding in front of the antennae; head in front rounded and porrect; posterolateral angles of the broadly transverse, rugulose posterior lobe of pronotum globose with an inwardly curved acutely pointed spinous process on each side; a piceous spot at the posterolateral and postero-
median margin; anterolateral angles of anterior lobe of pronotum strongly developed with posteriorly recurved spines; scutellum piceous; coxae, trochanters, longitudinal lines to femora, three annulations to tibiae and apices of tarsi piceous; membrane fuscous.

Previous Record: Darjeeling.

Present Record: Tamil Nadu: Poondi (450).


Male: (S.No. 12) Length 20 mm, width across the abdomen 7.5 mm macropterous; oblong; piceous; a large spot almost crossing corium at inner angle pale ochraceous; first and second joints of rostrum almost subequal in length; scape considerably shorter than head; anterior frontal process obscure, median frontal furrow deep, posteriorly confluent with the narrow interocular incision; pronotum with the anterior lobe globose, strongly sculptured; the posterior lobe broadly rugose, almost twice as long as anterior lobe; posterolateral angle prominent with inwardly curved small spine; posterior discal area unarmed; proepimeral bulge prominent; scutellar spine obliquely ascendant; connexivum somewhat strongly recurved, with alternate ochraceous and piceous bands; genital segments black; legs and body longly and densely pilose.

Previous Record: Bengal (Brit. Mus) and Bombay (Leith).

Present Record: Tamil Nadu: Bharathiar University (450).
Genus: EDOCLA

Edocla Stal, Ofv-Ak. Forh. P. 189, (1859); Stal, En. Hem. IV, P.65 (1874)

Type: E.bisbisignata Stal, a South African species.

Distribution: Ethiopian and Oriental Regions.

Body sub-elongate; head with the postocular area slightly longer than the anteocular area of the head, transversely impressed between eyes; antennae with the first joint not longer than head; ocelli prominent; pronotum granulate, with the anterior and posterior lateral angles distinctly and some what longly acutely spinous, sometimes disk of anterior and sometimes disk of posterior lobe spinous; disks sometimes unarmed; scutellum with a long apical obliquely ascending spine; legs and antennae pilose; rostrum with the first joint not quite as long as the second; abdomen beneath with a distinct central ridge; sternum granulate.

Total number of species recorded by Distant from Orient ...... 3
Total number of species known from India ...... ...... ..... 1
Total number of species recorded earlier from Southern India ...... 1
Total number of species recorded for the first time from Southern India in the present account ...... ...... ..... 3
Total number of species described new to science in the present account ...... ...... ...... ...... ..... 3

Male: (S.No. 19) Length 9 mm, width across the abdomen 3mm; macropterous; elongate; piceous; head, antennae anterior angles and central disk of anterior pronotal lobe, two central spots near anterior margin lateral angles, a very small spot before them and narrow hind margin to posterior pronotal lobe, scutellar spine, base of clavus and a large subapical spot (extending from lateral to apical margins, angulate on each side) to corium, connexivum, coxae, legs, abdomen, lateral margins of metasternum, and anterior acetabula pale luteous; annulation to first joint of antennae, biannulations to femora and tibiae, apices of tibiae, spots to connexivum above and beneath, lateral areas and apex of abdomen and the membrane pale violaceous brown; anterior lobe of pronotum much smaller than posterior lobe; ocelli very much raised, more approximate deeply incised in front of the base across the posterior margin of the eyes; the antennae pilose, basal segment almost as long as anteocular area slightly incrassated; apically annulated, second joints almost double that of first joint; first and second joints of rostrum almost subequal; posterior lobe of pronotum granulate with stramineous spot on the antero median area; scutellum broadly triangular, apically spinous, spine apically stramineous; posterolateral spines of posterior pronotal lobe stramineous, curved inward; fore and mid femora biannulated, hind femora apical half fuscous, tibiae apically and medially annulated; connexivum banded.
In female posterolateral spine of posterior lobe of pronotum much more strongly developed and inwardly curved. Second abdominal segment of connexivum with tubercle, rest of the abdominal segments, connexivum serrated.

Previous Record: Mysore (Slater, Brit. Mus.).

Present Record: Tamil Nadu: Maruthamalai (500), Malumitchampatti (300), Chandrapuram (350), Anaikatti (500), Kovaipudur (400), Aliyar (300), Walayar (200), Madukkarai (300), Kangayam (250), Bharathiar University (450), Vadavalli (450), Aramboli (50), Alagar Kovil (350), Tanjore (100), Vandalur (50), Chengleput (100), Tirukovilur (100), Kantachipuram (100), Tirutani (150), Krishnagiri (450) and Masinagudi (950); Karnataka: Mysore; Chamundi Hills (950).

Genus: VELITRA


Type: V. rubropicta Amyot and Serville.

Distribution: Oriental and Papuan Regions.

Body elongately ovate, moderately depressed; basal margin of the pronotum convexly rounded; apex of the scutellum laterally, spinously, elongately produced; posterior coxae placed moderately wide.
apart; posterior tibiae a little longer than the femora; prosternal process
sulcated and posteriorly recurved; disk of abdomen beneath flattened;
scape elongate and slender; pedicel atleast four times longer; antenniferous tubercles not laterally prominent.

Total number of species recorded by Distant from Orient ..... 5
Total number of species known from India ..... ..... 4
Total number of species recorded earlier from Southern India ..... Nil
Total number of species recorded for the first time from
Southern India in the present account ..... ..... 2
Total number of species described new to Science in
the present account ..... ..... ..... 1

*Velitra sinensis* Walker (*Reduvius*) Cat. Het. VII. P. 196 (1873);

Female: (S.No. 26) Length 14 mm, width across the abdomen
4.5 mm; oblong; macropterous; piceous with reddish tinge; legs, rostrum, and
antennae brownish piceous; head abruptly expanding into the postocular
hump, carrying the ocelli, with wide interoculular space; collar swollen,
globose; first antennal segment extremely short, nodule like, vertically
erect; median frontal furrow deep, curving outward in between the eyes,
and bifurcating outward in front of the antennae; antennae pilose, scape
dark; deep depression in front of the antennal base prominently marking
the corium; rostrum finely pilose, first two segments subequal; carinations
of the anterior lobe of pronotum bearing minute tubercles continuing
posteriorly as three ridges on either side of the median foveation,
connecting the posterior lobe and shallowing out on the latter; anterolateral angles minutely tuberculate; posterior lobe with lateral prominence separated from the disc by the groove; disc unarmed; lateral prominence unarmed; junction of the anterior and posterior lobe deeply sulcated, posteriorly continuing as a furrow; scutellar spine porrect; scutellum with prominent dorso median foveation; irregular transverse stramineous fascia crossing the corium a little beyond and extending up to the inner angle; membrane with a small spot at base and centre, inner margin stramineous; anterolateral margin of the anterior lobe of pronotum with small tubercles; base of the stridulatory groove conspicuously developed into tubercle on either side; apically deeply sulcate and curved inwardly.

Previous Record: Ceylon (Green); China and Hong Kong (Brit. Mus.).

Present Record: Tamil Nadu: Coimbatore (450).

Genus: PASIRA


Type: P. basiptera Stal, a palaeartic species.

Distribution: Palaeartic, Ethiopian, and Oriental Regions.
Head behind eyes somewhat prominent, narrowed at base; before eyes conically produced; antennae with the first joint not reaching apex of head, second joint about twice as long as first; rostrum with the first joint shorter than the second; anteocular area longer than postocular area; pronotum unarmed, medially constricted, posterior angles not produced and with both carinations and sulcations; scutellar spine pointing obliquely upward; anterior femora moderately incrassated; legs unarmed; anterior tibiae provided with a tibiarolium, posterior tarsi with the first joint short, second and third joints subequal.

Total number of species recorded by Distant from Orient ...... 1
Total number of species known from India ...... ...... ...... 1
Total number of species recorded earlier from Southern India ...... Nil
Total number of species recorded for the first time from Southern India in the present account ...... ...... ...... 1
Total number of species described new to Science in the present account ...... ...... ...... ...... Nil


Male: (S.No. 28) Length 7 mm, width across the abdomen 3 mm; macropterous; ovate; piceous brown; apical area of clavus and spots to connexivum above and beneath luteous; first joint of antennae moderately incrassated and not reaching apex of head; anterior angles of pronotum
a little prominent, anterior lobe slightly sculptured, the posterolateral
gle of posterior lobe of pronotum slightly globose, lateral margin
of posterior lobe of pronotum grooved, and posterior margin convex;
scutellum with dorsally carinate posteriorly directed sharp spine,
two small tuberculate spine one on either side of the base; membrane
transparent passing abdominal apex; connexivum prominent and banded;
clavus immediately behind the median scutellar spine transparently
white; corium basally ochraceous apically piceous brown; anterior
femora robust, apically narrowed; body and legs sparingly and finely
tomentose.

**Previous Record**: North Bengal (Campbell, Brit. Mus.), Burma;
Rangoon, Palon, Mandalay (Fea).

**Present Record**: Tamil Nadu: Vadavalli (450 - Light trap).

**Genus**: CENTROCNEMIS

Centrocnemis Signoret, Ann. Soc. Ent. Fr. P. 545, (1852); Stal

**Type**: C. deyrollei Signoret, a Malayan species.

**Distribution**: Oriental Region.

Body ovate, depressed, lateral margins of the abdomen
dilated, generally longly spined, but sometimes only obscurely tuberculate;
head long, postocular area much longer than anteocular area, which
is armed with six spines - one near base of each eye; rostrum with the first joint almost as long as the two apical joints together; antennae with the first joint about as long as anteocular area of head; pronotum with the lateral angles strongly and broadly produced, their apices more or less spinous; anterior lobe with two prominent discal spines; scutellum with the apex somewhat tuberculously produced.

Total number of species recorded by Distant from Orient ..... 3
Total number of species known from India ..... ..... ..... 2
Total number of species recorded earlier from Southern India ... Nil
Total number of species recorded for the first time from Southern India in the present account ..... ..... ..... 1
Total number of species described new to Science in the present account ..... ..... ..... ..... Nil


Female: (S.No. 29) Length 16 mm, width across the abdomen 6.5 mm; macropterous; oblong; body warty; dull brownish ochraceous; mottled with fuscous; cephalic tubercles porrect, tubercle on the base of antennae more sharp, pointing outward; long tubercles on the dorsum and inner margin of the eyes slightly pointing outward and backward and a small median tubercle, in between at the posterior inner angle of the eyes directing outward; a vertical tubercle in between the two ocelli and a small tubercle at the base of each ocellus scape a little thickened and granulate and about as long as anteocular
portion of head; pronotal anterior lobe bearing prominent discal tubercles and anterolateral angles with two short tubercles; prosternum with two prorect tubercles, one on either side of the base of the stridulatory groove; posterior lobe of the pronotum laterally expanded as paranotal wings, bearing three prominent tubercles on each side and small warty tubercles in between; carina of posterior lobe on either side of median longitudinal groove connecting the anterior lobe and diverging posteriorly outward fuscous; the two prominent tubercles of the posterolateral angles pointing upward; scutellum triangular, with a median carina apically terminating into a vertically directed, acutely pointed white tubercle; abdomen ventrally carinated on either side of the mid line, posteriorly joining with the median carination of the first two abdominal segments; connexivum apically bearing a pair of backwardly directed, moderately developed tubercles with two short tubercles in between; the legs armed with varying number of long and short pointed tubercles, especially on the ventral surface; tubercles of this third pair of legs less pointed, fore coxae, femora and tibiae beset with patches of dark comb like spines.

Previous Record: Ceylon; Colombo (Lewis), Maskeliya (Green).

Present Record: Tamil Nadu: Alagar Kovil (350)

Genus: REDUVIUS

Reduvius Lamarck, Syst. P. 294 (1801); Latreille, Hist. Nat. III, P.249 (1802); Bermeister, Handb. II, P. 234 (1835); Spinola, Ess. Hem. P.120 (1840); Amyot and Serville, Hem. P. 337 (1843); Reuter, Act. Soc. Sc. Fenn. XIX, No. 15, P. 3 (1892); O si ug, Symb. Phys. II,

Type: R. personatus Linnavauri.

Distribution: Palaearctic, Ethiopian, Oriental and Australasian Regions.

Body moderately elongate; head oblong; anteocular area of head longer than postocular area; eyes large, completely extending across the lateral areas of the head; rostrum with the second joint much longer than the first; pronotum transversely constricted before the middle, the anterior lobe with a strong central sulcation or fissure which is more broadly extended to disc of posterior lobe, anterior much shorter than the posterior lobe, which has its posterior margin moderately convex; scutellum with its apex spinose or acute; legs moderately long and slender; anterior femora unarmed; anterior tibiae provided with a tibiarolium of variable dimensions.

Total number of species recorded by Distant from Orient ...... ... 8
Total number of species known from India ...... ...... ...... 7
Total number of species recorded earlier from Southern India ...... 1
Total number of species recorded for the first time from Southern India in the present account ...... ...... ...... Nil
Total number of species described new to Science in the present account ...... ...... ...... Nil

Female: (S. No. 30) Length 9 mm, width across the abdomen 3 mm; macropterous; elongately ovate; head, pronotum and scutellum castaneous brown; eyes black; antennae brownish ochraceous; head beneath, rostrum and sternum castaneous brown; abdomen beneath, legs and connexivum ochraceous; corium brownish ochraceous; clavus (excluding inner margin) and the subclaval area to corium greyish white; membrane pale fuscous; scape slightly incrassated, a little shorter than head and considerably shorter than pedicel; rostrum with the basal joint reaching anterior margin of eyes, distinctly shorter than the second joint; head transversely impressed at posterior margin of eyes, anterior lobe of pronotum scarcely longer than posterior lobe, but narrower, more globose and with anterior angles shortly tuberculously prominent; posterior lobe with the basal angles obtusely broadly subangulate but very slightly prominent; scutellum apically finely and some what longly porrectly spinous, scutellar spine ochraceous; membrane not quite but nearly reaching abdominal apex; connexivum exposed on each side of hemelytra; body and legs more or less finely longly pilose.

Previous Record: Bengal; Chapra (Mackenzie).

Present Record: Delhi.
Genus: APECHTIA


Type: A. mesopyrrha Reuter.

Distribution: Ceylon

Body ovate, depressed; head porrect, with a distinct impression in front of eyes; rostrum with the second joint distinctly longer than the first; antennae with the first joint not passing apex of head; second about three times longer than first; pronotum very strongly constricted near middle, the anterior angles tuberculously prominent, a distinct central longitudinal impression, posterior margin convexly rounded; scutellum produced into a long horizontal apical spine; prosternal process sulcate, its apex compressed; anterior and intermediate femora incrassated, armed beneath with a series of short tuberculuous spines; posterior tibiae slightly longer than femora. Allied to Sminthocoris, from which it differs principally by the shorter second joint of the antennae.

Total number of species recorded by Distant from Orient ..... 1
Total number of species known from India ..... Nil
Total number of species recorded earlier from Southern India ... Nil
Total number of species recorded for the first time from Southern India in the present account ..... 1
Total number of species described new to science in the present account ..... Nil

Female: (S.No. 31) Length 7.5 mm; width across the abdomen 3.5 mm; ovate; brachypterous; piceous; glabrous; posterior lobe of pronotum, disk of abdomen beneath and posterior tibiae some what testaceous; rostrum with the second joint distinctly longer than the first; antennae with the first joint not passing apex of head, second about three times longer than first; pronotum very strongly constricted near middle, the anterior angles tuberculously prominent, a distinct central longitudinal impression, posterior margin convexly rounded; scutellum produced into a long horizontal apical spine; corium sanguineous, subopaque, its lateral margin narrowed at base, also apical angle, black; membrane black; apex of clavus, internal area of corium and short basal line at base of membrane between external vein at apex of corium dull flavescent; black vittae on apical area of clavus and adjoining subclaval area of corium.

The fifth instar nymph has fore and mid femora armed with tubercles all around, the ventral one being prominent, the dorsum of the head, pronotum, and wing pads all with warty projections; first segment of the antennae nodule like, the antenniferous tubercles, spinous.

Previous Record: Ceylon

Present Record: Tamil Nadu: Siruvani (450).
NEW DESCRIPTIONS

Acanthaspis siruvanii sp. nov. (Fig. 18)

**Male**: Length 18 mm; width across the abdomen 5 mm; macropterous; unicolourous, black; body elongately ovate; head elongately ovate; anterior extension of the frons forked, porrectly terminating just in front of the antennal base; median frontal groove fairly broad at the middle and posteriorly expanding to remain confluent with the deep transverse fissure in front of the transparently white ocelli; a faint ochraceous blotch on the post gena on either side of the ocellar prominence; first joint of the antennae much shorter than head, directed anteriorly, second joint a little longer than the first; first segment of the rostrum a little longer than the second; pronotal sulcations shallow, carinations not conspicuously elevated, both foveations and sulcations unicolourous, black; anterior lobe slightly longer than the posterior lobe, anterolateral tubercle prominently globose, posterior lobe rugose, discal prominence conspicuous, discal tubercle moderately prominent, posterolateral tubercle moderately developed, outwardly directed; scutellar spine moderately developed, vertically directed upward, body of the scutellum rugose, meso and meta nota with prominent ridge along their posterior border; wing pad rudimentary not extending beyond the posterior limit of the mesonotum; legs elongate, pilose; the tibiarolium of the fore and mid legs extending almost 1/3 the length; carina on either side of the midline of the second visible abdominal segment well formed extending upto the middle of the third segment, median posterior rugose expansion of the first visible abdominal segment most conspicuous; dorsum covered with the fine short hairs; scent gland orifice of the first visible abdominal segment prominent, posteriorly
FIG. 18 ACANTHASPIS SIRUVANII SP. NOV.
directed, minute; faintly ochraceous spots on the connexivum of the second to sixth segments, but no median spots; eighth abdominal segment dorsally elevated and transversely striated.

This species closely resembles *Acanthaspis nigripes* in being similar in shape, hue and carination of the second and third abdominal segments but it could be readily recognised by its micropterous, uniformly dark wing pad that does not extend beyond the mesonotum, nature of development of the mesonotal and metanotal ridged border, presence of rudimentary discal tubercle of the posterior lobe of the pronotum, ochraceous spots on the connexivum and by the prominently formed median posterior rugose expansion of first visible abdominal segment.

**Type Information:**

*Holotype:* Male serial No. 13. *Paratype:* a single female, both pinned specimens deposited at present in the reduviid collection of the Division of Entomology, Bharathiar University, Coimbatore, India.

**Collection Information:**

Male and female specimens were collected from underneath barks of tree in the Tropical Rain Forest region of Siruvani, Coimbatore District, Tamil Nadu on 8-5-1985 at elevation 450 MSL, temperature 33°C, and humidity 48%
Acanthaspis alagiri sp.nov. (Fig. 19)

Female: Length 19 mm, width across the abdomen 7 mm; macropterous; wings almost terminating subapically; oblong; brownish ochraceous with fuscous spots; head black with dark deep fissure across in front of the base of the ocellar prominence across the posterior margin of the eyes; a faintly marked ochraceous post genal spot on either side of the ocellar prominence; antennal first segment apically fuscous black almost as long as the head; curved outward and passing the apex of the head; rest of the antennal segments pale fuscous; rostrum moderately incrassated, first two segments black, third segment pale ochraceous, first and second segments subequal in length; pronotal anterior lobe small, globose, fuscous with irregular sulcations alternating with corresponding carinations bearing minute tuberculate processes, anterior margin of the pronotum luteous, bearing anterolateral posteriorly directed tubercular processes; the collar, occipital region and eyes fuscous; posterior lobe of pronotum with median sulcation not reaching the posterior end, pale yellowish with a dark streak contiguous with the anterior lobe along the lateral margin, terminating at the base of posterolateral sharply pointed, inwardly curved spine; discal spine moderately developed, vertically pointed; posterior median margin fuscous; scutellum black, scutellar spine sharply pointed, curved vertically upward; legs pilose, femora with basal and apical fuscous bands, fore and mid tibiae with apical and sub-basal fuscous bands and with well formed tibiolarium arising from the middle and extending beyond the tip of the tibiae as a lobe, hind tibiae ochraceous with faint pale fuscous bands apically and medially, coxae and trochanters fuscous; hemelytra with broad transverse yellowish white blotch subapical to
corium, corium and clavus basally ochraceous; membrane fuscous basally and pale fuscous apically, membrane along the veins fuscous, the rest pale fuscous; connexivum banded with the fuscous; ventrally the first three abdominal segments uniformly pale yellowish, posteriorly fuscous except at the connexivum.

This species resembles Acanthaspis quinquespinosa by the similar development of pronotal armature but could be readily recognised from it by the banding of the femora and tibiae, colouration of the pronotum, hemelytra and sternites of the anterior abdominal segments as well as the banding of the connexivum.

Type Information:

Holotype: Female, Serial No. 14, pinned specimen deposited at present in the reduviid collection of the Division of Entomology, Bharathiar University, Coimbatore, India.

Collection Information:

Single specimen collected from underneath stone at the foot hill of Alagal Kovil, Madurai District, Tamil Nadu on 18-01-1985 at elevation 300 MSL, temperature 27°C and humidity 62%.

Acanthaspis carinata sp.nov. (Fig. 20)

Male: Length 12 mm, width across the abdomen 7 mm; apterous; ovate fuscous; tomentose; frontal groove very narrow, frontal tubercular extension rudimentary; eyes globose, black; ocelli rudimentary, not
prominently elevated; gena with stiff hairs; second antennal segment a 
little longer than first, first antennal segment slightly swollen more 
apically, shorter than the head, passing apex of the head; rostrum pale 
fuscous, unicolourous, inner surface slightly lighter, first and second 
segments subequal in length; anterior lobe of pronotum globose, almost 
as long as the posterior lobe, more prominent by the characteristic 
sculations and carinations; the carinations between foveations ochraceous, 
the most lateral carination fuscous; anterior margin of anterior lobe narrow 
and cleft in the middle, with obscure lateral tubercles; the posterior 
lobe without any trace of median depression, its posterolateral tubercles 
moderately developed; posterior lobe and its tubercles uniformly ochraceous; 
scutellum obscure and its tubercle like black nodule; epimeral process 
of the prosternum with prominently developed anteriorly directed tubercle; 
second abdominal segment, with a carina on either side of the mid dorsal 
line ochraceous, spots at lateral areas of the connexivum upto the sixth 
abdominal segment, as well as a pair of median row from third to sixth 
abdominal segments, completely covered with tomentose hairs; legs ochraceous 
brown, unicolourous; fore and mid tibiae with tibiarolium extending about 
1/3 of the length.

This species has close resemblance with Acanthaspis pedestris 
in having the carinations of the second abdominal segments and pronotal 
anterior lobe as well as the connexival spots and unicolourous nature 
of the legs, but it can be readily recognised from Acanthaspis pedestris 
by its minute size, the nature of the posterior lobe of the pronotum 
without the median sulcation and lesser development of anterolateral tubercles 
as well as the tubercular development of epimeral lobe.
FIG. 20 ACANTHASPIS CARINATA SP. NOV.
Type Information:

**Holotype:** Male Serial No. 15, pinned specimen deposited at present in the reduviid collection of the Division of Entomology, Bharathiar University, Coimbatore, India.

Collection Information:

Single specimen collected from underneath stone in Maruthamalai, Coimbatore District, Tamil Nadu on 01-01-1985 at elevation 500 MSL, temperature 29°C, humidity 60%.

*Acanthaspis nigripes* sp.nov. (Fig. 21)

**Male:** Length 21 mm, width across the abdomen 8 mm; micropterous; elongate; unicolourous; piceous, except the distal half of the wing which is luteous; head elongately ovate; the frontal groove confluent with the transverse deep fissure in front of the ocellar prominence; second segment of the antenna almost double the length of first segment which is shorter than the head; first rostral segment slightly longer than the second; eyes very prominently globose; ocelli purplish brown, much elevated; collar elongate, swollen posteriorly; thorax laterally and ventrally with dense hairs, dorsally with sparsely distributed hairs; pronotal anterior and posterior lobes almost equal in length; anterior lobe globose, dorsally marked by sulcations and carinations, both uniformly piceous, anterior border of the anterior lobe slightly concave, lateral margins with backwardly directed short tubercles, posterior margin of the posterior lobe on either side of the middle line transversely foveated upto the base of the postero-
lateral sharply pointed tubercular spine; scutellar spine elongate, sharply pointed upward, scutellum with well demarcated dorso-median foveation; posterior lobe of pronotum and scutellum rugulose; wing pad rudimentary, extending up to the first visible abdominal segment; membranous part opaque and luteous; fore and mid tibiae with well developed tibiarolium covering almost 1/3 of the length of the tibia; abdomen entirely smooth dorsally and with a few hairs, ventrally the second and third visible abdominal segments with a prominently formed carination on either side of the middle line; dorsal abdominal scent gland of the first visible abdominal segment directed towards the dorsum; genital segment dorsally with densely set transverse striations.

This species resembles *Acanthaspis pedestris* by the pair of carinations present on the second and third abdominal segments, direction of the opening of scent gland orifice and in the general formation of the pronotum, but markedly differs from it by its coloration, size, much elongate shape of the body and the head, smoothness of the dorsum, microptery, second antennal segment much elongate than the first and the second rostral segment shorter than the first.

**Type Information:**

Holotype: Male Serial No. 16, pinned specimen deposited at present in the reduviid collection of the Division of Entomology, Bharathiar University, Coimbatore, India.
Collection Information:

Single specimen collected from underneath a boulder in the Yelagiri Hills, North Arcot District, Tamil Nadu, on 18-04-1984, at elevation 1000 MSL, temperature 34°C and humidity 56%.

Acanthaspis minutum sp. nov. (Fig. 22)

Female: Length 7 mm, width across the abdomen 3 mm, apterous; ovate; fuscous with ochraceous bands; densely tomentose; head elongately ovate; deep transverse fissure across the head at the posterior margin of the eyes; ocelli conspicuously absent; postocular and anteocular areas subequal; a faint ochraceous spot on the gena behind each eye; antennae pale fuscous, first segment as long as preocular area of the head, slightly incrassated, curved outwardly; second antennal segment annulated slightly longer than the first; rostrum fuscous, second/ slightly longer than the first; anterior lobe of pronotum globose, much longer than posterior lobe, dorsal carinations fairly well formed, fuscous, its anterolateral tubercles obscure; posterior lobe like a narrow/behind the anterior lobe, laterally produced on either side as a small tubercle, carinations on the anterior lobe continuous as minute ridges on the posterior lobe; scutellum fuscous, broadly triangular, dorsally punctate, apically produced into moderately elongate, upwardly directed spine; fore femora incrassated, mid femora slightly incrassated with an apical fuscous band; hind femora slender, as long as the tibia, with a subapical fuscous band; abdomen expanded, fuscous, densely tomentose throughout; entire connexivum from first visible segment to seventh segment with fuscous bands dorsally and ventrally, each fuscous band with central ochraceous streak.
This species resembles the female *Edocla slateri* by the absence of ocelli, general body shape, color, incrassated first antennal segment and annulations of the legs but markedly differs from it by its minuteness in size, having greatly reduced posterior lobe of pronotum, obscurely formed tubercles, smooth connexivum and incrassated fore femora.

**Type Information:**

**Holotype**: Female Serial No. 17, pinned specimen deposited at present in the reduviid collection of the Division of Entomology, Bharathiar University, Coimbatore, India.

**Collection Information:**

Single specimen collected from underneath stone in the Nagarjuna Sagar Dam site, Andhra Pradesh, South India on 07-07-1985 at elevation 200 MSL, temperature 34°C and humidity 58%.

*Edocla maculatus* sp.nov. (Fig. 23 )

**Male**: Length 10 mm, width across the abdomen 3 mm; macropterous; oblong; brownish ochraceous; pilose; head dorsally brownish; eyes and ocellar prominence fuscous; median frontal fissure moderately deep, posteriorly enlarged to remain confluent with the transverse fissure running across the head in front of the ocellar prominence, on either side of the fissure; the frons rugose upto the antennal base; frontal extension in between the antennae prominently porrect and apically bifid; antennal first segment shorter than the anteocular area slightly incrassated, second segment almost double the length of the first segment; first two rostral segments subequal in length; rostrum and ventral surface of the head
fuscous; the collar medially ochraceous, laterally fuscous; ocelli fuscous; pronotum almost unicolourous, anterior lobe globose, fuscous in front and ochraceous dorsally and laterally; deeply constricted posterolaterally and transversely demarcating posteriorly the large pronotal lobe; dorsal carinations and sulcations of the anterior lobe obscurely differentiated, carinations terminating posteriorly on the anterior margin of the posterior lobe of obscure ridges, anterolateral marginal tubercles obscure; posterior lobe dorsally punctate, yellowish white; posterolateral prominence with inwardly curved spines; posterior margin transversed by brown band, discal prominence obscure; scutellum fuscous with ochraceous long spine obliquely turned upward; corium pale ochraceous with fuscous marking along its inner border and covered by light brown hairs; membrane fuscous, mottled with pale fuscous, membrane extending a little beyond the abdomen, almost covering the latter; legs densely pilose, fore and mid femora slightly incrassated, ochraceous and spotted with brown, hind femora with subapical and sub-basal brown bands, ochraceous in between the tibiae with apical, middle and terminal brownish bands; fore and mid tibiae with more apical moderately formed tibiarolium; connexivum with fuscous spots, connexivum of first segment with prominent tubercle and the rest bare.

**Female:** Brachypterous, hemelytra extending up to the third abdominal segment, but the pattern of its pigmentation is similar to that of male.

This species resembles *Edocla slateri* in its general pattern of distribution of hairs and banding of legs but could be readily differentiated from it by the pattern of the coloration of the pronotum,
hemelytra, connexivum and legs as well as by the total absence of anterolateral tubercle on the anterior lobe of pronotum and by the prominently bifid nature of the anterior extension of the frons.

Type Information:

Holotype: Male Serial No. 20, Paratype Serial No. 21, two males and Allotype Serial No. 23, all pinned specimens deposited at present in the reduviid collection of the Division of Entomology, Bharathiar University, Coimbatore, India.

Collection Information:

Holotype collected from underneath stone in Alagar Kovil, Madurai District, Tamil Nadu on 20-01-1985 at elevation 300 MSL, temperature 28°C and humidity 58%, Paratype males collected from Yelagiri Hills, North Arcot District, Tamil Nadu on 13-09-1985 at elevation 1000 MSL, temperature 23°C, humidity 70% and also from Courtallam, Tirunelveli District, Tamil Nadu on 20-01-1985 at elevation 300 MSL, temperature 29°C, humidity 56%. The allotype specimen collected from the same location along with the holotype.

Edocla heberii sp. nov. (Fig. 24)

Male: Length 8 mm, width across the abdomen 2 mm; macropterus; oblong; light brownish ochraceous; pilose; head dorsally, ochraceous; ocelli reddish; eyes black; collar medially ochraceous merging with coloration of dorsum of the head; antennal first segment not incrassated, curved
outward, almost as long as anteocular area, second segment twice as long as the first segment, first two segments ochraceous, filament piceous; head ventrally, and pronotal anterior lobe all around, rostrum, abdomen ventrally and membrane fuscous; rostrum first and second segments sub-equal in length; fore and mid femora with three brownish bands, the basal band being more prominent, hind femora two banded, basal band more extended, tibiae uniformly three banded; legs and body dorsally highly pilose; pronotal anterior lobe more fuscous than posterior lobe; anterolateral tubercle inconspicuous, foveations and carinations more elevated, dark transverse band dividing the two lobes; posterior lobe yellowish white, transverse band dividing the two lobes, posterior lobe yellowish white, transversely elongate; posterior border with fuscous transverse band; posterolateral angles with moderately developed spines, slightly curved inward; scutellum broadly triangular, fuscous, highly pilose, scutellar spine vertically directed; corium ochraceous with light brownish tinge basally; membrane brownish with ochraceous spots, more along the posterior margin; connexivum deflected upward with brownish bands dorsally and ventrally, connexival spine on the second abdominal segment more prominent.

This species resembles *Edocla maculatus* in having similar development and coloration of posterior lobe of pronotum and connexival banding, but it could be readily recognised from it by bicolourous pronotum, reddish ocelli and by the coloration of the antennae and legs.
FIG. 24  EDOCLA HEBERII  SP. NOV.

2 mm
Type Information:

**Holotype**: Male Serial No. 24, pinned specimen deposited at present in reduviid collection of the Division of Entomology, Bharathiar University, Coimbatore, India.

Collection Information:

Single specimen collected from underneath stone in Madras Christian College Campus, Tambaram, Madras, Tamil Nadu on 05-07-1985 at elevation 50 MSL, temperature 33°C and humidity 60%.

**Edocla punctatum** sp. nov. (Fig. 25)

**Male**: Length 11 mm, width across the abdomen 3 mm; macropterous; oblong; fuscous ochraceous; pilose; head dorsally ochraceous; eyes and ocellar prominence brownish, a genal spot behind the eyes; first antennal segment with a basal ochraceous ring and the rest piceous, second antennal segment piceous, double the length of the first segment; frontal fissure deep but frontal anterior extension obscure; rostral segments piceous, first two segments subequal in length; both lobes of pronotum almost unicolourous, fuscous; pronotal anterior lobe with conspicuous median anterior piceous spot, dorsal carinations and sulcations moderately formed; posterior lobe highly punctate, light brownish, larger than anterior lobe; pronotal posterior angles with short ochraceous tubercles directed outward; pronotal anterior angle with small short black obscure tubercle; scutellum black, with almost vertically directed black spine; fore, mid and hind femora with one subapical ochraceous narrow band, the rest black; tibiae basally, medially and distally dark banded, tarsomeres pale fuscous,
tibiarolium on fore and mid tibia more apical; membrane apically brownish basally the area bordering the corium throughout yellowish white except the apex which is black, corium with a longitudinal brown streak in the middle; connexivum with piceous bands, bare but for a small insignificant tubercle at the second segment.

This species resembles *Edocla heberii* in having similar carinations and sulcations of pronotal anterior lobe and banding of the legs etc., but it differs from it in having the post genal ochraceous spots, dark coloration of the legs, antennae, head, scutellum and its spine and by the basal ochraceous ring of the first antennal segment.

**Type Information:**

*Holotype:* Male Serial No. 25, pinned specimen deposited at present in the reduviid collection of the Division of Entomology, Bharathiar University, Coimbatore, India.

**Collection Information:**

Single specimen collected from underneath stone in Topslip, Anamalai Wild Life Sanctuary, Coimbatore District, Tamil Nadu on 19-12-1985 at elevation 1000 MSL, temperature 25°C and humidity 76%.

*Volitra neelai* sp. nov. (Fig. 26)

*Female:* Length 10 mm, width across the abdomen 3 mm; macropterous; body elongately ovate; piceous with median broad castaneous blotch on the corium; a broad median ochraceous spot on the posterior lobe of the pronotum; head elongate; anteocular area a little longer than the
postocular area; antennae arising laterally in front of the eyes; a transverse fissure in between the eyes, in front of which the frons makes two lateral prominences and a median depression; head in front porrect; postocular area globose with a median longitudinal shallow furrow, continuing posteriorly upto the collar; ocelli moderately formed, each set wide apart; eyes large, transverse; scape slightly incrassated, not passing the head, pedicel more than twice as long as scape; second rostral segment slightly longer than the first, first two segments slightly incrassated, third segment minute; collar cylindrical; anterior lobe of pronotum piceous, almost as long as the posterior lobe but narrow and globose with oblique carinations and sulcations and median longitudinal fissure extending upto the middle of the posterior lobe; anterolateral angles with robust tubercles; three longitudinal carinae passing from the anterior to posterior lobe on either side of the median furrow; posterior lobe fuscous with median ochraceous spot, widened posteriorly with posterolateral prominence and moderately formed discal prominence; posterior margin broadly convex; scutellum broadly triangular with median foveation and lateral carination, apically forming a porrect tubercle; claval base, outer and inner margins and apex of corium fuscous; membrane piceous, slightly passing the abdomen; a white line demarcating the apical area of corium from the membrane; fore femora highly incrassated, mid femora moderately incrassated; tibiae and tarsomeres fuscous, hind tibiae basally and apically ochraceous; tibiariolium of the fore tibiae passing the first tarsomere; connexivum deflected upward and exposed; abdomen concolourous; genital segment pointed with ochraceous hairs.
FIG. 26  VELITRA NEELAI  SP. NOV.

3 mm
Type Information:

**Holotype** Monotypic Female Serial No. 27, pinned specimen deposited at present in the reduviid collection of the Division of Entomology Bharathiar University, Coimbatore, India.

Collection Information:

Single specimen collected from underneath barks of a tree in the Tropical Rain Forest Region of Siruvani, Coimbatore District, Tamil Nadu on 02-0-1985 at elevation 450 MSL, temperature 31°C, humidity 64%.

**Mesacanthaspis** gen. nov.

The *Mesacanthaspis* gen. nov. can be readily recognised from all other genera of Acanthaspidinae by the conspicuous presence of paired median dorsal tubercles on the second to the seventh abdominal segments (the male has less conspicuous tubercles present on the third to sixth segments alone), total absence of tibiariola ("tibial pad" or "fossula spongiosa") on the fore and mid tibiae which are otherwise characteristically found in all other genera of Acanthaspidinae; total absence of ocelli, though the ocellar prominence is found and by the prominently elevated scent gland ostiole pointing outwardly on the lateral margin of the first visible (second) abdominal segment. In all other genera, though this character has not been so far considered for taxonomic purposes, the scent gland ostiole is less conspicuous and directed obliquely, posteriorly.
The other general characters include tomentose hairs, densely covering the entire body, slightly incrassated short first antennal segment, moderately expanded and apically forked anterior porrect extension of the frons in between the antennal base and the second rostral segment distinctly longer than the first.

In all other characters, including the morphology of the eggs, this genus could be placed closer to *Acanthaspis*.

*Mesacanthaspis kovaii* sp.nov. (Figs. 27 & 28)

**Female**: 12 mm long and 6 mm broad across the abdomen 3 mm across the metathorax; fuscous testaceous; tomentose; antennae and tibiae ochraceous, segment apex of tibiae piceous; head moderately elongate; ovate; first antennal/second segment almost as long as the first; median frontal fissure conspicuously deep and dark branching in front at the level of the anterior border of the eyes and each branch terminating at the base of the antennae, the frons anteriorly extending as an elevated, porrect, apically bifid process in between the base of the antennae; the anteocular area in front of this process declivent; second rostral segment much longer than the first; pronotal anterior lobe globose, humped by the prominent formation of carinations and sulcations, anterolateral angles without tubercles; posterior lobe of pronotum punctate, separated from the anterior lobe as a narrow strip by the fairly deep constriction between both, interrupted in the middle by the prominent median dorsal longitudinal foveation; posterolateral angles of posterior lobe forming conspicuous, outwardly directed tubercles; meso and metanota uniformly narrow and elongate;
FIG. 27  MESACANTHASPIS KOVAI' SP. NOV. (FEMALE)

3 mm
FIG. 28 MESACANTHASPIS KOVAI SP. NOV. (MALE)

3 mm
scutellum and its tubercle obscure, the latter directed vertically upward; wing pad rudiments obscure; tibiae without tibiarolium, abdomen abruptly expanding from the metathorax, the first visible segment with a prominently elevated scent gland ostiole at each end, the ostiole projecting and pointing outward, paired dorso median, vertically projecting, prominent tubercles on each of the abdominal segments from second to seventh; posterior angles of the connexivum with light ochraceous, posteriorly directed minute tubercles, the tubercle of the second segment being more prominent; genital segment acutely pointed.

**Male:** Slightly smaller, median dorsal paired tubercles on the third to sixth abdominal segments smaller, tubercles of the connexivum more prominently formed.

**Type Information:**

Holotype: Female. Paratype: Male, both pinned specimens deposited for the present in the Division of Entomology, Bharathiar University, Coimbatore, India.

**Collection Information:**

Holotype collected from underneath stone from the semi arid ecosystem of Chandrapuram, Coimbatore District, Southern India on 28-12-1983, at elevation 350 MSL, temperature 29°C and humidity 50%. The Paratype also collected from the same locality on 14-11-1984 at temperature 28°C and humidity 60%.
Neoacanthaspis g.nov.

The Neoacanthaspis g. nov. can be readily recognised from all other genera of Acanthaspidinae (with the exception of Mesacanthaspis) by the total absence of tibiariolium in both the fore and mid tibiae; porrectly projecting loral lobes; spinocity of the connexivum, unarmed pronotum and forked pygophore spine.

The other general characters include tomentose hairs densely covering the head, pronotum and scutellum; scape slightly incrassated, both scape and pedicel subequal; frons marked by a 'Y' shaped fissure, its stem starting from the interocular furrow and its arms terminating at the base of the antennae; in between the antennae the frontal process remaining forked and lifted up and the head in front of it declivent; ocelli distinctly raised above the surface of the head; antenniferous tubercles not prominent; eyes transverse and globose; second segment of the rostrum distinctly longer than the first; and pronotal anterior lobe marked by the characteristic prominent carinations and sulcations.

In all other characters, including the morphology of genitalia, this genus could be placed in between Reduvius and Acanthaspis.

Neoacanthaspis maculatus sp.nov. (Fig. 29)

Male: Length 14 mm, width across the abdomen 5 mm; macropterous; oblong; tomentose hairs clothing head, pronotum and scutellum; fuscous; head dorsally, antennae, corium, spots on the connexivum above and beneath, tibiae, lateral areas of posterior lobe of pronotum, ochraceous; head ovate; anteocular area a little longer than the postocular area; frons
marked by a 'Y' shaped fissure, its stem starting from the interocul
furrow and its arms terminating at the base of the antennae; in between
the antennae the frontal process remaining forked and lifted up; clypeus
dclivert, with a tuft of porrect bristles; on either side of clypeus
the loral lobe projecting porrectly; head ventrally fuscous; collar short
and narrow; eyes piceous, globose and transverse; ocelli pale fuscous,
encircled by white ring, very distinctly prominent and much elevated,
projecting far above the level of the eyes; antennae pilose, scape and
pedicel subequal in length, scape slightly incrassated and longer than
the head; pedicel apically and filamentar segments throughout, fuscous;
antenniferous tubercles not prominent; rostrum fuscous, moderately incrassated;
second segment almost twice as long as the first; pronotum fuscous;
anterior and posterior lobes constricted in the middle; anterior lobe
subglobose conspicuously marked by carinations and sulcations, with a
median longitudinal deep furrow extending upto the middle of the posterior
lobe; anterolateral angles non tuberculate; posterior lobe granulate and
the posterior margin convex; posterolateral angles of the posterior lobe
slightly expanded and rounded, turned upward; scutellum fuscous, broadly
triangular, apical half with a median carination terminating into elongate
upwardly curved tubercle; basal half of clavus, inner margin and base
of corium fuscous; corium and clavus covered with ochraceous hairs;
membrane fuscous, mottled with ochraceous spots; membrane passing the
abdomen; abdomen ventrally fuscous, pilose; the genital segment ochraceous;
spiracles elevated, pointing outward, at the base of each ochraceous
spot; connexivum above and beneath with ochraceous spots and spinously
produced at angles; legs pilose; fore and mid femora slightly incrassated;
femoral base and apices of tibiae and entire tarsi fuscous; fore and mid
tibiae devoid of any trace of tibiarolium.
FIG. 29 NEOACANTHASPIS MACULATUS SP. NOV.

3 mm
Since all the 16 specimens at hand were collected in light traps and are macropterous males, it is possible that the females are apterous. However, a thorough search of females in the vicinity proved futile.

Type Information:

**Holotype** Male Serial No. 77, **Paratype** several, all males, all pinned specimens deposited for the present in the reduviid collection of the Division of Entomology, Bharathiar University, Coimbatore, India.

Collection Information:

All specimens were collected from the Scrub Jungle ecosystem of Bharathiar University Campus, Coimbatore District, Tamil Nadu by light trap during 16-11-1987 to 25-11-1987 at elevation 450 MSL, temperature 27°C and humidity 70%.
KEY TO THE SOUTH INDIAN GENERA OF ACANTHASPIDINAE STAL

1. First segment of the rostrum much longer than the second; 
eyes and anteocular area strongly spined; pronotal lateral
angles broadly expanded and spinously produced;
invariably alate ........ ........ Centrocnemis Signoret
First segment of the rostrum shorter or as long as the second;
eyes and head unarmed; pronotal lateral angles not broadly
expanded; either macropterous or brachypterous or apterous ... 2

2. Second rostral segment much longer than first; either
macropterous or apterous; tibiarolium and ocelli present
or both rarely absent ........ ........ ........ ........ 3
First two rostral segments almost equal; either
macropterous or micropterous or apterous; tibiarolium
and ocelli invariably present ........ ........ ........ 4

3. Scutellum either rarely rudimentary or spinously produced;
dorsum of abdominal segments with median paired tubercles
or rarely smooth; ocelli present or absent; tibiarolium totally
absent; connexivum smooth or spinous ........ ........ ........ 10
Scutellum spinuously produced; dorsum of abdominal
segments unarmed; tibiarolium and ocelli present; scape not
passing the head ........ ........ ........ ........ 7
4. Ante and postocular areas almost equal or the latter slightly longer; pronotum completely unarmed; fore femora incrassated, either spinuously setaceous or smooth ventrally; macropterous; scape elongate or abbreviated; abdominal segments with or without gland scars ...... ...... ...... 5

Ante and postocular areas almost equal; pronotum invariably armed; fore and mid femora moderately incrassated; macropterous or apterous; scape abbreviated ...... ...... 8

5. Fore femora smooth; scape elongate and slender; abdominal segments without gland scars .... ...... ...... Velitra Stal

Fore femora either spinously setaceous or with peg like spines; scape abbreviated; fore tibiae either straight or curved; head rounded or subparallel; pygophore process hooked or straight ...... ...... ...... ...... 6

6. Fore femora ventrally with peg like spines; fore tibiae curved pygophore process straight; head rounded .... ...... Nanokerala Wygodzinsky and Lent

Fore femora ventrally spinously setaceous; fore tibiae straight; pygophore process hooked; head subparallel .... Hadrokerja Wygodzinsky and Lent
7. Antennal base lateral, in front of the eyes; fore and mid femora incrassated and tuberculously spined; macropterous or brachypterous; pronotum strongly constricted near middle; head dorsoventrally compressed and coarsely granulate; ocelli obscure, far removed from each other ......... 

..... Apechtia Reuter

Antennal base dorsally placed, close to the eyes; fore and mid femora moderately incrassated but unarmed; macropterous; head subglobose; ocelli prominent with ocellar prominences approximating each other ..... ..... ..... 9

8. Anterolateral angles of pronotum strongly spined; carinations and sulcations of the anterior lobe abbreviated; discal spines invariably absent; scape moderately incrassated just passing the head ..... ..... ..... Edocla Stal

Anterolateral angles of the pronotum obscurely tuberculate; carinations and sulcations of the anterior lobe very conspicuously displayed; discal spines either present or absent; scape slender and elongate, passing the head ...

..... Acanthaspis Amyot and Serville

9. Pronotal anterior lobe with a median longitudinal foveation alone; scutellum apically tuberculate; ante and postocular areas subequal ..... ..... Reduvius Lam
Pronotal anterior lobe with both carinations and sulcations; scutellar spine pointing obliquely upward; anteocular area longer than postocular area .... Pasira Stal

10. Scutellum rudimentary and unarmed; apterous; dorsum of abdominal segments with median paired tubercles; tibiarolium and ocelli totally absent; connexivum almost smooth .... Mesacanthaspis g.nov.

Scutellum spinously produced; macropterous; ocelli well developed and raised; tibiarolium totally absent; connexivum spinously produced .... Neoacanthaspis g.nov.
KEY FOR THE IDENTIFICATION OF SPECIES OF THE GENUS ACANTHASPIS
AMYOT AND SERVILLE OF SOUTHERN INDIA

1. Micropterous or apterous; pronotum minutely tuberculate anterolaterally and posterolaterally; scutellar process either tuberculate or moderately spinous; usually concolourous or rarely spotted ...... ...... ...... ...... ...... ...... 2

Macropterous; pronotum armed; discal spines present or absent; scutellum spinously produced; not concolourous .... 6

2. Apterous; body setaceous and ovate; connexivum spotted; fore and mid femora moderately incrassated; posterior lobe of pronotum finely or coarsely granulate ...... ...... ...... ... 3

Micropterous; body bare and oblong; concolourous; fore femora moderately incrassated or cylindrical; posterior lobe of pronotum rugulose ...... ...... ...... ...... ...... ... 5

3. Pronotum bicolourous; posterior lobe finely granulate; without either discal prominence or median foveation, but uniformly subglobose ...... ...... ...... ...... ...... A. carinata sp.nov.

Pronotum concolourous, posterior lobe coarsely granulate, with conspicuous discal prominence and median foveation ... 4
4. Minute; legs banded; wing rudiments obscure ... *A. minutum* sp.nov.

Medium size; legs concolourous; apterous ... *A. pedestris* Stal

5. Postocular area elongate and more cylindrical; head spotted at the base of each antenna and behind each eye (genal spot); wing rudiment black, not passing the metathorax; dorsum of the first visible abdominal segment medially rugulose and crested; connexivum minutely spotted .... *A. siruvanii* sp.nov.

Postocular area subglobose; head concolourous; wing rudiment luteous, passing the first abdominal segment; dorsum of the first abdominal segment longitudinally rugulose but not medially crested ...... ...... ...... *A. nigripes* sp.nov.

6. Discal area of the posterior lobe/pronotum; prominently spinous or minutely tuberculate; pronotum, bicolourous or spotted; not setaceous; carinations of the anterior lobe either obscure or tuberculously formed; posterior lobe transversely rugulose; posterolateral angles prominently spinous; legs concolourous ...... ...... ...... ...... 7

Discal area not prominent, bare; pronotum setaceous; either concolourous or spotted; carinations and sulcations of the anterior lobe either coarsely granulate or faintly rugulose; posterolateral angles moderately tuberculate but not spinous; legs concolourous, or banded ...... ...... ...... ...... 10
7. Discal area minutely tuberculate; carinations and sulcations of the anterior lobe obscure; posterolateral angular spines basally spotted .... .... ... A. flavipes Stal

Discal area prominently spinous, pronotum bicolourous or spotted, carinations and sulcations of the anterior lobe conspicuous or tuberculously produced .... .... .... 8

8. Pronotum bicolourous, legs banded .... .... A. alagiri sp. nov
Pronotum spotted, legs concolourous ...... ...... ...... 9

9. Pronotal posterior margin ochraceous, carinations of the anterior lobe tuberculous, clavus with only distal ochraceous spot, connexivum prominently ochraceous ... A. angularis Stal
Pronotal discal and posterolateral spines basally ochraceous; carinations of the anterior lobe very obscurely tuberculate; clavus basally and distally spotted; connexivum prominently spotted piceous .... .. A. quinquespinosa Fabricius

10. Pronotum concolourous; black; apices of the femora and entire tibiae ochraceous; or the entire legs concolourous, black; frontal extension conspicuously pointed or obscure ...... ...... ...... ...... ...... .... 11
Pronotum spotted ochraceous or white; legs concolourous; black or banded; membrane apically subocellate .... ... 13
11. Apices of the femora and entire tibiae, ochraceous, frontal extension prominently cleft ..... A. apicata Distant

Legs concolourous, black; frontal extension moderately pointed or obscure; corium with basal and subapical spots or with subapical spot alone; membrane with or without apical spot ..... 12

12. Frontal extension porrectly pointed, corium with both basal and subapical spots, membrane apically spotted white. A. siva Distant

Frontal extension obscure, corium with subapical ochraceous spot and membrane concolourous ..... A. rugulosa Stal

13. Legs concolourous, black; pronotum with discal spots alone ..... A. trimaculata Reuter

Legs banded; pronotum either with discal spot alone or with both discal and lateral spots; spots at the base of the antennae and behind the eyes present or absent ..... 14

14. Pronotum with discal spots alone; spots at the base of the antennae and behind eyes present; larger in size ..... A. rama Distant

Pronotum with both discal and lateral spots; spots at the base of the antennae and behind the eyes absent ..... 15
15. Lateral spots of the posterior lobe of the pronotum not even reaching the base of the posterolateral obscurely pointed tubercle; spots ochraceous .... A. sexguttata Fabricius

Lateral spots of the posterior lobe of the pronotum continuous upto the tip of posterolateral, more acutely pointed tubercle; spots snow white .... A. tergmina Burmeister
KEY TO THE IDENTIFICATION OF THE SOUTH INDIAN SPECIES OF

EDOCLA STAL

1. Pronotum concolourous, either piceous or ochraceous;
   anterolateral and posterolateral angles of the pronotum
   either robustly spinous or moderately tuberculate; hemelytra
   and legs differently shaded ..... ..... ..... 2

   Pronotum bicolourous, anterior lobe fuscous, posterior lobe
   ochraceous; anterolateral and posterolateral angles of pronotum
   very obscurely or moderately tuberculate; hemelytra and legs
   shaded differently ..... ..... ..... 3

2. Pronotum piceous; anterolateral angles of pronotum robustly
   spinous, posterolateral angles moderately tuberculate;
   corium with basal and subapical ochraceous spots, the rest
   of the hemelytra piceous; legs with piceous bands
   ..... E. slateri Distant

   Pronotum ochraceous, anterolateral angles of pronotum
   obscurely tuberculate and posterolateral angles with acutely
   pointed tuberculate spine; corium ochraceous almost throughout;
   membrane fuscous; legs with fuscous spots ... E. maculatus sp.nov.
3. Anterior lobe of the pronotum concolourous, fuscous; posterior lobe ochraceous, with a narrow fuscous transverse band at the posterior margin; both anterolateral and posterolateral angles with moderately developed acutely pointed tubercles; head dorsally ochraceous, ventrally fuscous; antennae concolourous; fuscous; corium basally dull brown, membrane fuscous with dull brown spots; legs with fuscous bands; small in size E. heberii sp. nov.

Anterior lobe of pronotum pale fuscous with a crescentic piceous transverse anterior fascia; anterolateral angles obscurely tuberculate; posterolateral angles moderately tuberculate; head concolourous, piceous; antennae piceous; scape with a basal ochraceous ring; corium whitish yellow basally and apically piceous with a longitudinal fuscous line at the middle; membrane bordering the corium piceous and the rest of the area fuscous; legs predominantly piceous E. punctatum sp. nov.