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An Analysis and a Breakdown of the Genus *Platycarenus* Fieber (Heteroptera, Pentatomidae, Discocephalinae)

By Herbert Ruckes[1]

INTRODUCTION

The species that have long been accepted as belonging to the genus *Platycarenus* Fieber are in a chaotic state of classification and for some time have needed restudy so that their proper phyletic relationships could be clarified and brought into perspective.

In 1861, Fieber erected the genus *Platycarenus* to accommodate a pentatomid previously known as *Cydnus umbractulatus* Fabricius. Subsequently, additional species were assigned to *Platycarenus,* either by transfer from the genus *Discocephala* Laporte, or by original description, so that at present there are 15 included. However, not all show close morphological similarity. In 1909, Kirkaldy recognized that the species of *Platycarenus,* as then constituted, were not homogeneous, but rather a complex of dissimilar forms and proceeded to subdivide the original genus into two subgenera, namely, *Platycarenus* for *P. umbractulatus* (Fabricius) and *Discocephalessa* for eight others. Unfortunately, Kirkaldy never gave a subgeneric description for *Discocephalessa.* Therefore we have been at a loss to know on just what characters he based his decision to combine a

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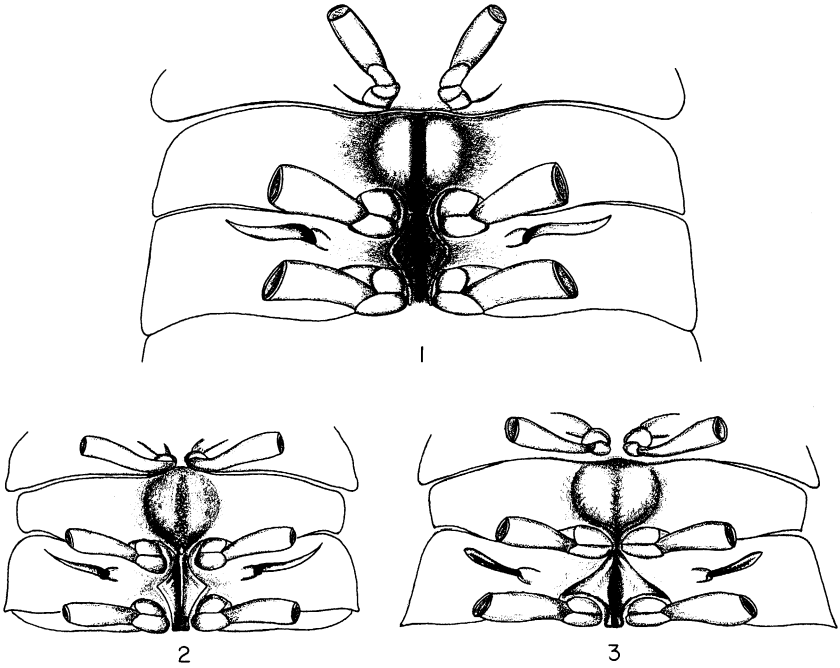


FIGS. 1–3. Mesosternum and metasternum. 1. *Discocephalessa notulata* (Stål). 2. *Lineostethus clypeatus* (Stål). 3. *Alveostethus politus* (Signoret).

number of apparently unrelated species in this subgenus. Furthermore, he left seven other species in the genus *Discocephala* as being "of doubtful position." Some of these are very closely related to the ones he had previously placed in *Discocephalessa* and rightfully should have been assigned there.

The present article is an attempt to rearrange the species currently included in *Platycarenus* into naturally related groupings by the use of basic morphological differences which, in my mind, requires the erection of several new genera. *Platycarenus* Fieber is retained as a monotypic genus. The subgenus *Discocephalessa* Kirkaldy is elevated to full generic rank, but some of the species previously included in the subgenus are segregated and given new generic status. One species (*Platycarenus nigroventris* Ruckes) is eliminated altogether because it does not belong in the same tribal division with *Platycarenus* and its allies.

SPECIAL MORPHOLOGY

The work culminating in this paper employed such morphological

characteristics as the degree of tumidity of the mesosternum and the nature of its median sulcus, the form and character of the xyphus, the contour of the metasternum, the angulation and excavation of the margins of the last several abdominal segments in the male, the form and size of the ostiolar peritreme, the linear ratios of the antennal segments, and the composition of the several types of pygofers, with special emphasis on the differences exhibited by their parameres. Such characteristics had not been used by previous authors and were found to be quite important in this diagnosis.

Measurements of angles and arcs mentioned in the descriptions were made with the use of a 360-degree protractor fitted into an ocular, and generously donated to me for that purpose by Mr. G. Francis Gray, of the Finescale Company, Los Angeles.

Mesosternum

Figures 1–3

In one group of species (*umbractulatus, notulata, terminalis,* and others; fig. 1), the mesosternum is strongly bilaterally tumid, with a clearly defined, punctured, longitudinal furrow, or broad sulcus, between the tumid halves; the xyphus is likewise punctured and furrowed.

In a second group of species (*clypeatus, marginellus,* and *tenebricornis*; fig. 2), the mesosternum is only mildly tumid, with a very narrow, shallow, median sulcus, in some cases resembling an impressed line. In these species the xyphus is flat and impunctate, but has a short, low, thin, raised line which is contiguous with a similar line on the metasternum.

In the third group of species (*latifrons, rugulosus, politus,* and others; fig. 3), the mesosternum is only feebly tumid and its median sulcus is very poorly defined; its xyphus is flat, neither longitudinally sulcate nor having a raised line.

Metasternum

Figures 1–3

In the species of the first group mentioned above (fig. 1), the metasternum is clearly hexagonal; its basal and apical margins are distinctly truncate, each being about half of the length of any one of the four other margins; its lateral margins are thin and slightly elevated, leaving the disc weakly impressed and punctured like the median furrow of the mesosternum.

In the second group mentioned above (fig. 2), the basal and apical ends of the metasternum are considerably narrowed, in some cases almost angular, so that the disc assumes an apparently rhomboidal form;

it is flat and impunctate, but has a thin, low but distinct, median, raised line contiguous with a similar one on the mesosternal xyphus.

In the third group mentioned above (fig. 3), the metasternum is slightly elongated, in some cases narrowly so, in others more broadly so, usually hexagonal, although in some species unequally so, and becomes almost pentagonal in outline; its lateral margins are thickened and elevated so that a median fusiform furrow, or a deep semicylindrical trough, is formed between them; in many cases the terminal two rostral segments lie in this trough.

Margins of Terminal Abdominal Segments in Males

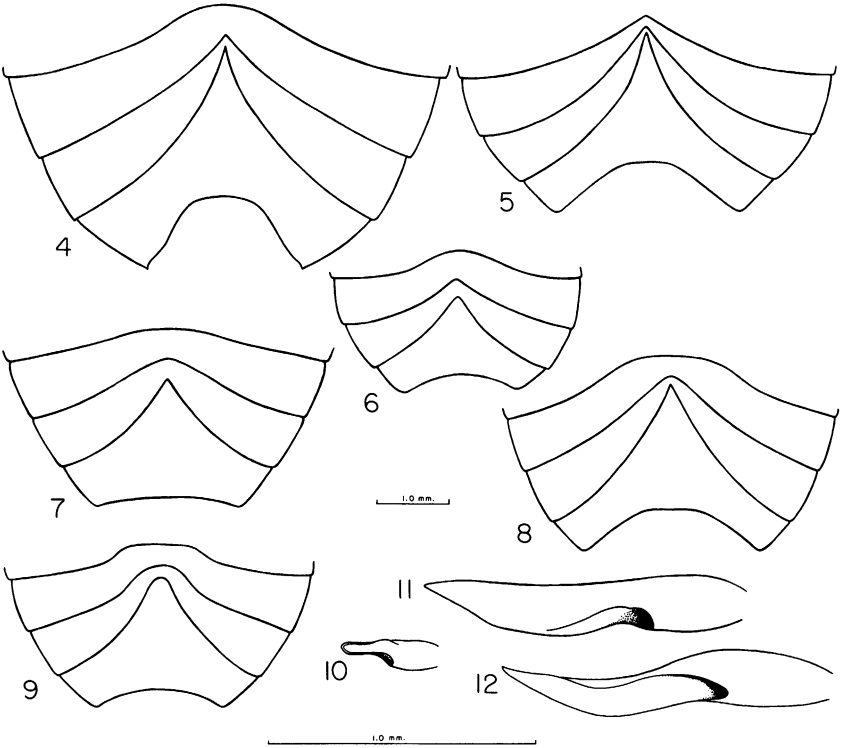
Figures 4–9

In male specimens, the basal (anterior) margin of the seventh abdominal sternite is invariably produced forward toward the middle of the abdomen, the median length of the segment thus becoming several times longer than its marginal length. In being so produced, the central portion of the margin becomes either angular or very narrowly arcuate. If angular, the angulation is acute, but the degree of acuity varies in different species.

In *kollari* (fig. 4), *vicina* (fig. 5), and *politus,* the angle measures no more than 30 degrees, usually less, and in this paper is considered acuminate. In *umbractulatus* (fig. 6), *notulata* (fig. 7), *latifrons* (fig. 8), and several other species, the angle measures between 40 degrees and 70 degrees, does not taper to a needle-like point as in the acuminate forms, and herein is considered as being acute. In *clypeatus* (fig. 9) and some other species, the median portion of the margin is not at all angulated, but rather is narrowly rounded, or arcuate, the arcuation being about 85 degrees. Altogether, there is not very much conformity to a basic pattern evident in this collection of species.

The forward projection of the margin of the seventh sternite has a marked influence on the form of the homologous margin of the sixth sternite, and in some cases on the fifth as well. The degrees of modification are shown in figures 4 to 9 and are mentioned in the descriptions of the respective genera and species.

The depth and shape of the excavation of the apical (posterior) margins of the seventh segment, both tergal and sternal, vary considerably. Some diagnostic value may be attached to these differences but are considered of less importance than some of the other characters used in this study. The differences are shown in figures 4 to 9 and are described in the text.



FIGS. 4–9. Contour of basal and apical margins of the three posterior sternites in the male. 4. *Uncicrus kollarii* (Fieber). 5. *Acclivilamna vicina* (Signoret). 6. *Platycarenus umbractulatus* (Fabricius). 7. *Discocephalessa notulata* (Stål). 8. *Alveostethus latifrons* (Dallas). 9. *Lineostethus clypeatus* (Stål).

FIGS. 10–12. Right ostiolar peritreme. 10. *Platycarenus umbractulatus* (Fabricius). 11. *Discocephalessa notulata* (Stål). 12. *Lineostethus clypeatus* (Stål).

OSTIOLAR PERITREME

Figures 10–12

The ostiole of the metapleural scent gland is found some distance laterad of the midline between the acetabula of the mesocoxae and metacoxae. Its margin is continued laterally as a peritreme which, with its associated sulcus, acts as a distributing mechanism to carry the secretion onto the evaporatorium. The form of the peritreme varies. In *umbractulatus* (fig. 10) it is quite small, less than 1.0 mm. in length, digitiform (subauricular), and ends abruptly near the middle of the metapleural plate. Its sulcus is surficial. In *notulata* and others (fig. 11), it is somewhat flattened, lanceolate, with a slight curvature, measures more

than 2.5 mm. in length, has a sharp (trenchant) posterior margin and a tapering apical end which reaches two-thirds of the distance across the metapleuron; its sulcus is near the posterior margin and is evanescent near the middle of the peritreme. In *clypeatus* and its allies (fig. 12) it is more narrowly lanceolate, usually with an obtuse bend beyond its middle so that the tapering apical end is directed obliquely anteriorly and reaches about three-fourths of the way across the metapleural plate approaching the anterior margin of the latter. In this case the sulcus is prominent at the ostiole but is evanescent near the region of the bend.

Types of Pygofers and Parameres

Figures 13–24

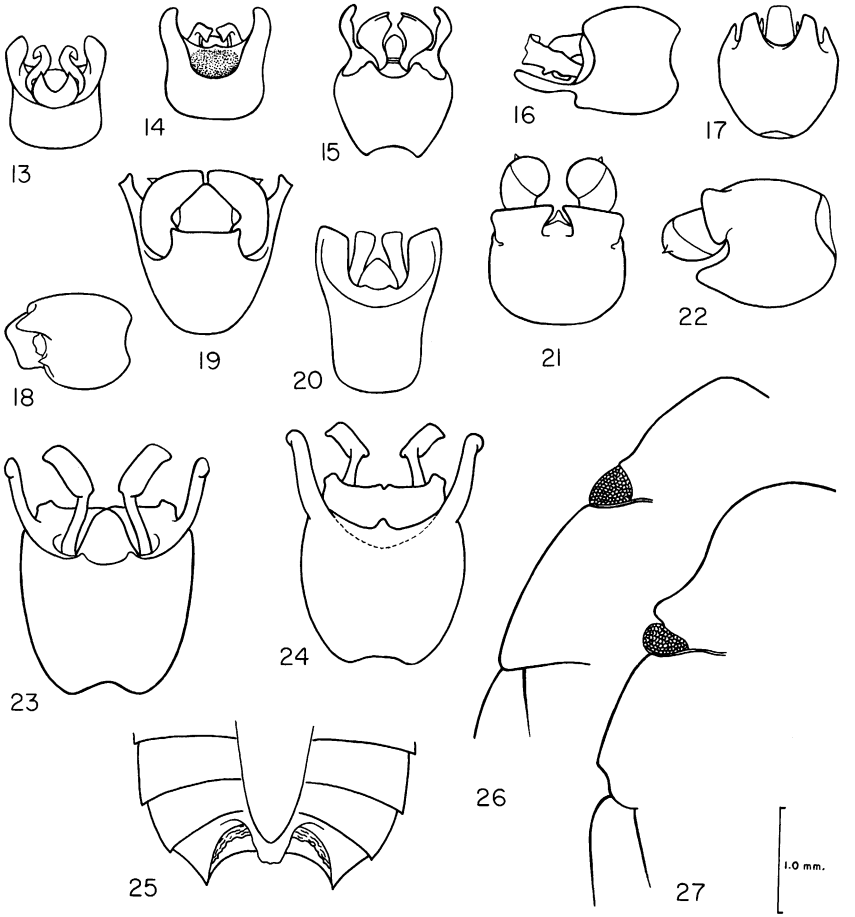
The lateral apical corners of the pygofers in most cases have posteriorly produced lobular processes which are herein called "lateral apical lobes." Whether or not all such structures in all the discocephalines are homologous has not been decided. In this paper, the term "lateral apical lobes" is used with the proviso that the terminology may later be changed when further knowledge concerning their nature is forthcoming.

In all species under consideration, the proctiger is completely sclerotized and strongly deflexed at its middle so that the anal orifice opens ventrally.

As will be seen from both the accompanying descriptions and figures 13 to 24, there is great diversity in the build of the pygofers and their associated parameres, which may be further argument for placing the respective species in several new genera.

In *umbractulatus* (figs. 13, 14), the genital capsule is globular, and the genital cup is quite shallow. The dorsal border is not emarginate centrally but has a piceous, lunate, posteriorly projecting flange, the lateral cusps of which surpass the apical face of the proctiger. The lateral apical lobes are stubby and stout, curve slightly upward, and are apically obtuse. The proctiger is short and broad. The parameres are proportionately large, strap-shaped, and lie horizontally in the cup before abruptly bending downward to overhang the ventral apical margin. The latter is feebly convex-arcuate and has a minute median notch. The submarginal impression is oval and partially filled with a spongy mass of sclerotized material.

In the several species of *Discocephalessa,* such as *notulata, andina,* and others (figs. 15, 16), the genital capsule is globular, and the genital cup is shallow. The central portion of the dorsal border is shallowly emarginate, but does not have a posteriorly projecting flange as does *umbractulatus.* The lateral apical lobes are long and thin, divergent, directed slightly upward, are narrowed at their bases and spatulate apically, and in a



FIGS. 13–24. Pygofers in dorsal, ventral, and lateral aspects. 13, 14. *Platycarenus umbractulatus* (Fabricius). 13. Dorsal view. 14. Ventral view. 15, 16. *Discocephalessa* sp. 15. Dorsal view. 16. Lateral view. 17, 18. *Lineostethus clypeatus* (Stål). 17. Dorsal view. 18. Lateral view. 19. *Alveostethus latifrons* (Dallas), dorsal view. 20. *Alveostethus politus* (Signoret), dorsal view. 21, 22. *Acclivilamna vicina* (Signoret). 21. Dorsal view. 22. Lateral view. 23, 24. *Uncicrus kollarii* (Fieber). 23. Dorsal view. 24. Ventral view.

FIG. 25. Apical end of tergum in male, *Uncicrus kollarii* (Fieber).

FIGS. 26, 27. Left lateral margin of head, pronotum, and base of hemelytron. 26. *Alveostethus latifrons* (Dallas). 27. *Acclivilamna vicina* (Signoret).

number of species have a shallow, anteapical notch on the inner margins. The proctiger is short and partially membranous at its base just beneath the dorsal border of the capsule. The parameres are short and stout,

their bases lie more or less horizontally in the cup, but their heads are held vertically and bend inward so that they partially obscure the proctiger, and are variously toothed, ridged, or otherwise irregular and do not overhang the ventral apical margin. The submarginal impression is small, rotund, and deep, but has no spongy, sclerotized filling.

In *clypeatus* (figs. 17, 18) and its allies, the genital capsule is globular, and the genital cup is deep and narrow. The central portion of the dorsal border is shallowly emarginate and laterally has a pair (1 + 1) of conspicuous, thin, translucent, triangular or subrectangular, foliaceous plates which extend over the dorsal portion of the cup and obscure some of its contents. The lateral apical lobes, *per se,* are lacking, the corners of the capsule being angular and confluent with the ventral apical margin and separated from the latter by a small notch. The proctiger is narrow, conspicuously deflexed so that its crest (the area of flexion) extends beyond the parameres and slightly beyond the ventral apical margin. The parameres are recessed beneath the dorsal foliaceous plates mentioned above, are triangularly styliform from the lateral aspect, and very thin or linear from the apical aspect; their apices are acuminate and reach the dorsal surface of the capsule between the foliaceous plates. The ventral apical margin is quite thickened, forms a broad M-shaped figure, the lateral arms of which are placed at right angles to the central arms, between which, in turn, the apical end of the proctiger fits. The submarginal impression is shallow and somewhat reniform in outline.

In *latifrons* (fig. 19), *politus* (fig. 20), and their allies, the genital capsule is ovoid, and the genital cup is shallow and very wide, so that its contents are completely exposed. The central portion of the dorsal border is slightly produced posteriorly, and in some cases has an apical emargination. The lateral apical lobes vary somewhat in the different species, but in general are stout and long and have truncate apices which may or may not be gradually turned upward. The proctiger is heavily sclerotized, somewhat conical in form, and in some species has a short oblique sulcus on each side near the base so that a small triangular area is set off from the central portion. The parameres are large and stout, their heads lie horizontally, their dorsal surfaces are flattened, and their longitudinal axes are usually arcuate so that, taken together, they resemble a pair of stout parentheses. Their apices are variously truncate, declivous, and slightly overhang the ventral apical margin. The ventral apical margin is feebly reflexed, either simply sinuate or bisinuate; if the latter then the median area is provided with a small, obtuse, lobule. The submarginal impression is broad and shallow.

In *vicina* (figs. 21, 22), the genital capsule is globular, and the genital

cup is shallow and completely filled with the associated organs. The central portion of the dorsal border is narrowly and feebly declivous and has a pair (1 + 1) of prominent, rectangular, opaque plates which are produced posteriorly and overlie the bases of the parameres. The lateral apical lobes are reduced to stubby, triangular processes, more or less auricular in appearance. The proctiger is quite small, conical or papillate in form. The parameres are very stout; the visible portions are globose, with slightly flattened dorsal surfaces and rotund posterior faces, each head having two minute, acute cusps. The parameres fill the genital cup, extend well beyond the other components of the pygofer, and somewhat resemble the heads of war clubs. The ventral apical margin is reflexed, with a shallow median emargination and lateral truncation. The submarginal impression is obsolescent.

In *kollari* (figs. 23, 24), the genital capsule is elongate-ovoid, and the genital cup is deep and impressed on each side beneath the dorsal border. The central portion of the dorsal border is produced posteriorly and distinctly emarginate apically in the form of a horseshoe. The lateral apical lobes are long and thin, slightly divergent, with their extreme apices reflexed. The parameres are large, their basal arms placed obliquely vertically, their apical heads abruptly flexed to lie horizontally in the cup in the form of a pair (1 + 1) of large, rectangular, oblong plates which greatly surpass the ventral apical margin as well as the lateral apical lobes. The ventral apical margin is reflexed, has a small median incisure and thickened lateral edges, the extreme lateral ends of which are produced into small, quadrangular lobes. The submarginal impression is very deeply impressed, or "pushed into" the wall of the genital capsule to form a small chamber. The ventral margin of this chamber is very thin (acute) and has a small, median, protruding, obtuse lobule.

SYSTEMATICS

The following genera belong to a tribal group of discocephalines (to which several other genera not here included also belong) which are characterized by having the median length of the head less than the diameter between the eyes, the cephalic disc flat, its margin from eye to eye rather evenly arcuate, almost semicircular, and without a pronounced anteocular sinus, by having the second rostral segment slightly longer than the lengths of the third and fourth segments combined, by having the mesosternum tumid but not gibbous, by not having the metasternum elevated into a platelike disc with an apical notch, by having the tibiae prismatic, with planosulcate upper surfaces, and by having five-segmented antennae.

Key to Genera

1. Median portion of venter piceous; mesosternum distinctly tumid, with prominent, densely punctured saddle, or broad median furrow between bilateral halves; metasternum hexagonal, likewise punctured..... 2

   Median portion of venter flavescent or fulvous, in no case piceous or castaneous; mesosternum mildly tumid, with narrow, shallow, impunctate, or very sparingly punctured sulcus; metasternum varied in form but not punctured..... 3

2(1). Tumid halves of mesosternum as well as median furrow distinctly punctured; antennal segment II not more than one-third of length of segment III; anterolateral pronotal margins very finely serratulate; ostiolar peritreme very small, digitiform; species about 7.0 mm. in length ..... *Platycarenus* Fieber

   Tumid halves of mesosternum glabrous, only median furrow distinctly punctured; antennal segment II at least half of the length of segment III, usually subequal; anterolateral margins of pronotum entire; ostiolar peritreme lanceolate; species 8.0 mm. or more in length..... ..... *Discocephalessa* Kirkaldy

3(1). Metasternum matte, flat, impunctuate, with median, thin, raised line; anterior pronotal margin without intramarginal groove or impressed furrow 4

   Metasternum glabrous, its lateral margins thickened, somewhat elevated, with pronounced fusiform median groove, or semicylindrical, deep trough between them, without median raised line; anterior pronotal margin with thin, intramarginal, impressed line, or shallow furrow..6

4(3). Mesosternum with narrow, impunctate, median sulcus; anterior apical angles of pronotum without acute denticle; anterolateral margins of pronotum neither carinate nor reflexed; metasternum subrhomboidal, basal and apical ends subangular; anteocular margins not, or very feebly, sinuate ..... *Lineostethus,* new genus

   Mesosternum with somewhat broad, median furrow having very few, scattered, fuscous puntures; anterior apical angles of pronotum with minute, laterally directed, acute denticle; anterolateral pronotal margins narrowly carinate, somewhat reflexed; metasternum hexagonal, with truncate apical end; anteocular margins distinctly sinuate..... 5

5(4). Posterior femora with anteapical uncinate process (somewhat reduced in female); dorsal surface uniformly smooth, quite glossy, not blotched; apex of scutellum subangular..... *Uncicrus,* new genus

   Posterior femora without anteapical uncinate process; dorsal surface somewhat uneven and blotched, at most semiglossy; apex of scutellum evenly rounded..... *Allinocoris,* new genus

6(3). Lateral margin of body from apex of head to base of hemelytron forming more or less smooth, arcuate line (fig. 26); embolium narrower than corium; pygofer (figs. 19, 20) with elongate, lateral, apical lobes, heads of parameres flattened, held horizontally; basal plates of female genital valves subtrapezoidal, facing ventrally, their surfaces not impressed... ..... *Alveosthethus,* new genus

   Lateral margin of body from apex of head to base of hemelytron forming multisinuate line (fig. 27), head with small notch just before eyes,

anteocular margins sinuate, humerus somewhat produced, leaving small notch between it and base of hemelytron; embolium as wide or wider than corium; pygofer (figs. 21, 22) without elongate lateral apical lobes, parameres held vertically, heads globose; basal plates of fenale genital valves subquadrilateral, inclined vertically, facing partially posteriorly, their surfaces impressed... *Acclivilamna,* new genus

GENUS *PLATYCARENUS* FIEBER

Figures 6, 10, 13, 14

Platycarenus FIEBER, 1861, pp. 77, 326. STÅL, 1872, p. 5 (as a subgenus of *Discocephala* Laporte). KIRKALDY, 1909, p. 215.

TYPE SPECIES: *Cydnus umbractulatus* Fabricius.

DIAGNOSIS: About 7.0 mm. in length; antennal segment II not more than one-third of length of III; anterolateral pronotal margins very finely serratulate; ostiolar peritreme not more than 1 mm. in length.

GENERIC CHARACTERS: Small, ovate, widest across abdomen; weakly convex above, flat beneath; punctures fine, dense, evenly distributed.

Head flat, anteocular margins mildly sinuate, apex entire, almost semicircular. Antennae short, barely attaining base of scutellum, finely setulose, segment II not more than one-third of length of III.

Pronotum subquadrangular, not quite two and one-half times as wide as long; anterior margin as wide as head through eyes, shallowly emarginate to receive head, anterior apical angles obtusely rounded; anterolateral margins essentially straight, slightly convergent anteriorly, very finely serratulate; humeral angles obtuse, humeri feebly umbonate, not produced. Scutellum tongue-shaped, frena ending at middle, margins barely sinuate there, apex evenly, rather broadly rounded. Hemelytral membranes not exceeding abdominal apex. Connexivum widely exposed, apical angles of segments rectilinear, barely produced. Apical margin of terminal tergite in male evenly, shallowly emarginate. Basal margin of terminal sternite in male produced into acute angle (fig. 6).

Bucculae low, uniform in height, abruptly divergent posteriorly; buccular canal very shallow. Rostrum reaching second visible abdominal sternite, basal segment just about reaching procoxae, segment II slightly longer than segments III and IV combined. Mesosternum distinctly bilaterally tumid, with tumid halves as well as median saddle densely punctured. Metasternum narrowly hexagonal, basal and apical margins truncate, disc mildly impressed and punctured. All thoracic sterna piceous. Ostiolar peritreme (fig. 10) very small, digitiform, ending abruptly near middle of metapleuron. Median abdominal furrow vaguely developed. Basal margin of seventh abdominal sternite in male produced forward

into 70-degree angle (fig. 6), reaching middle of abdominal disc; basal margin of sixth sternite arcuate in 120 degrees. Apical margin of seventh sternite evenly, moderately emarginate.

Basal plates of female genital valves subtriangular, apical margins feebly sinuate.

Pygofer (figs. 13, 14) described in section on Special Morphology; parameres overhanging ventral apical margin.

REMARKS: At present this genus appears to be monotypic.

Platycarenus umbractulatus (Fabricius)

Figures 6, 10, 13, 14

Cydnus umbractulatus FABRICIUS, 1803, p. 186.

Sciocoris lusitanica HERRICH-SCHAEFFER, 1835a, pp. 55, 90.

Halys lusitanica: HERRICH-SCHAEFFER, 1835b, p. 7, fig. 7.

Sciocoris umbractulatus: BURMEISTER, 1835, p. 273. BLANCHARD, 1840, p. 151.

Discocephala umbractulata: AMYOT AND SERVILLE, 1843, p. 123. FIEBER, 1851, p. 457. DALLAS, 1851, p. 147. STÅL, 1868, p. 17 (established subgenus *Platycarenus*). LETHIERRY AND SEVERIN, 1893, p. 84.

Discocephala conspersipes STÅL, 1860, p. 14.

Platycarenus umbractulatus: FIEBER, 1861, p. 326 (*umbractulatus* made type species). KIRKALDY, 1909, p. 215.

Discocephala Daagae: DISTANT, 1899, p. 422.

DIAGNOSIS: Pronotum subquadrangular, anterolateral margins very finely serratulate; antennae barely exceeding posterior margin of pronotum, segment II one-third of length of III.

SPECIFIC CHARACTERS: Sordid testaceous, with dense, fine, evenly distributed piceous punctures, those on venter becoming more widely spaced toward center; sterna and broad median region of abdomen dark castaneous to piceous. Anterolateral pronotal margins and basal third of hemelytral costal margins feebly expanded, pale.

Head about one-half again as wide between eyes as long medially, anteocular margins weakly sinuate, leaving small, obtuse nodule at base; apex evenly, almost semicircularly rounded; pronounced ring of punctures between eyes and ocelli; ocelli as far apart as distant from eyes. Antennae short, segments III and IV slightly flattened, feebly clavate, segment V fusiform; segmental ratios: 20/10/35/35/40, i.e., segment II half of length of I, less than one-third of length of III.

Pronotum as specified under generic characters; disc with shallow transverse furrow behind cicatrices. Extreme apex of scutellum sordid ivory. Hemelytra with small, irregular, impunctate, pale, discal spot; membranes dull, pale smoky brown, darkening slightly toward base, veins simple or in some cases singly branched.

Rostrum pale testaceous, extreme apex infuscated. Legs testaceous, irregularly spotted with ferruginous or brown spots; tarsi uniformly pale; femora stout, subclavate.

Pygofer (figs. 13, 14) as described under section on Special Morphology.

This species averages 7.0 mm. in length; 4.0 mm. in width across the greatest abdominal diameter.

TYPE MATERIAL: Holotype, female; South America, no date; deposited in the Universitetets Zoologiske Museum, Copenhagen (Fabrician collection).

DISTRIBUTION: Panama: Darien. Colombia. Peru. Brazil. Ecuador. Venezuela. British Guiana. Surinam. French Guiana. West Indies.

REMARKS: This species appears to be pan-Caribbean in distribution and extends into northwestern South America and the upper Amazon basin. I have carefully examined the types of Distant's species *Daagae* from the West Indies and find no differences between them and the typical *umbractulatus.*

Platycarenus umbractulatus was apparently transported to Portugal early in the nineteenth century, as it is recorded from that country as early as 1835. It never became established as an integral part of the Iberian fauna and has not been taken again since its original introduction. It is the only discocephaline species that has been found in the Old World.

GENUS *DISCOCEPHALESSA* KIRKALDY

Figures 1, 7, 11, 15, 16

Discocephalessa KIRKALDY, 1909, p. 215 (as a subgenus of *Platycarenus,* and *notulatus* designated as type species). No subgeneric description or diagnosis given.

TYPE SPECIES: *Discocephala notulata* Stål.

DIAGNOSIS: Mesosternum bilaterally tumid, with pronounced median furrow or saddle between halves, tumid halves glabrous, saddle densely punctured; antennal segment II slightly longer than I, more than one-third of length of III, usually subequal; anterolateral pronotal margins entire.

GENERIC CHARACTERS: Ovate, 8.00 mm. to 10.0 mm. in length; weakly convex above, rather flat beneath; sterna and broad central portion of abdominal disc dark castaneous to piceous.

Head one-third to one-half times wider between eyes than long medially; anteocular margins barely sinuate; apex semicircularly rounded, entire. Antennae setulose, reaching onto basal third of scutellum. Ocelli slightly farther apart than distant from eyes.

Pronotum subhexagonal, slightly more than two and one-half times as wide as long, anterior margin distinctly shorter than transhumeral diameter, trenchant, entire; anterior apical corners distinctly obtusely rounded; anterior margin shallowly, truncately excavated to receive head. Scutellum tongue-shaped, about one-fourth longer than wide at base, frena ending at the middle, apex reaching sixth tergite, evenly rounded. Hemelytral membranes reaching or slightly surpassing apex of abdomen, veins simple. Connexivum narrowly exposed, apical segmental angles barely produced. Apical margin of terminal tergite in male evenly, shallowly emarginate. Basal margin of seventh abdominal sternite in male (fig. 7) produced forward into acute, 70-degree angle, reaching middle of abdominal disc, apical margin of segment shallowly, evenly sinuate; basal margin of sixth sternite obtusely arcuate (fig. 7).

Bucculae low, abruptly divergent posteriorly; buccular canal narrow, shallow. Rostrum reaching onto third visible abdominal sternite; segment II slightly longer than lengths of segments III and IV combined. Only longitudinal saddle between tumid halves of mesosternum punctured. Metasternum narrowly hexagonal, disc weakly impressed, punctured. Ostiolar peritreme (fig. 11) broadly lanceolate or scimitar-shaped, posterior margin acute, slightly elevated, apex reaching about two-thirds of distance across plate. Median abdominal furrow shallow, vague.

Basal plates of female genital valves subtriangular to suboval, in latter case slightly longer than wide, inner margins contiguous for entire length.

Pygofer (figs. 15, 16) as described under section dealing with Special Morphology; parameres not overhanging ventral apical margin.

REMARKS: *Discocephalessa* is very closely related to *Platycarenus* but is distinguishable from that genus by the diagnostic characters.

At present I am not prepared to offer a key for the identification of the species of this genus, since the research on the *humilis* complex of species is incomplete.

Discocephalessa notulata (Stål), new combination

Figures 1, 7, 11

Discocephala notulata STÅL, 1862, p. 96; 1868, p. 18 (under subgenus *Platycarenus*). DISTANT, 1880 (1880–1893), p. 45, pl. 5, fig. 1. LETHIERRY AND SEVERIN, 1893, p. 84.

Platycarenus (*Discocephalessa*) *notulatus:* KIRKALDY, 1909, p. 216.

DIAGNOSIS: Length, 10.0 mm.; antennal segment II somewhat shorter than segment III; basal angles of scutellum impressed, fuscous; pronotal disc without transverse furrow.

SPECIFIC CHARACTERS: Oval; above sordid flavescent densely overlain with fuscous punctures, many on head and pronotum contiguous; corium with small, impunctate, irregular, pale, discal spot; in many cases three small, flavescent points across base of scutellum; beneath sordid flavescent, somewhat less densely punctured, central portion of abdomen impunctate; thoracic sterna and broad median portion of abdomen dark castaneous to piceous.

Head about one-fourth wider between eyes than long medially; anteocular margins feebly sinuate, gradually curved to semicircular, entire apex; punctures dense, about as far apart as their own diameters, some contiguous. Antennae setose, reaching basal third of scutellum, pale flavescent, densely conspersed with fine fuscous dots; segmental ratios: 20/35/40/50/60, i.e., segment II longer than I and approaching length of III.

Pronotum hexagonal, slightly more than two and one-half times as wide as long; anterior margin subtruncately excavated to receive head; anterolateral margins trenchant, pale, with few larger fuscous punctures, feebly explanate, ending abruptly just before humeri, leaving small obtuse notch there; disc without transverse furrow behind cicatrices; punctures on posterior portion tending to aggregate in short, vermicular, transverse lines, many contiguous; humeri feebly umbonate, obtuse. Scutellum twice as long as median length of pronotum and one-sixth longer than wide at base; punctures quite dense, evenly distributed; basal angles feebly impressed, commonly infuscated; in some specimens three small flavescent points across base. Hemelytral membranes dull smoky brown, darker at base where covered by apex of scutellum, and two paler, transverse bands across middle; veins simple, dark; free apical margin of corium straight, external apical angle roundly acute. Connexivum sordid flavescent, punctures fuscous, areas adjacent to incisures infuscated.

Rostrum sordid testaceous, apex not exceeding apical margin of second visible abdominal segment. Median abdominal furrow shallow, wide, poorly developed. Basal margin of seventh abdominal sternite in male (fig. 7) produced into acute angle of slightly more than 70 degrees, reaching middle of disc; apical margin of segment shallowly evenly arcuate.

Basal plates of female genital valves subtriangular, slightly longer than wide, apical margins convex-arcuate, internal apical angles obtusely rounded, inner margins parallel to each other, slightly elevated, and when taken together producing a vulviform appearance.

Pygofer globose; central portion of dorsal border shallowly emarginate; genital cup quite shallow; lateral apical lobes spatulate, directed obliquely

upward, inner margins obtusely angled, without anteapical notch; base of proctiger with heavily sclerotized ring having fringe of hairs; parameres stout, head expanded, facing posteriorly, consisting of two vertical crescentic lobes, a thicker, larger outer one, a slightly thinner and smaller inner one, the two separated by prominent vertical furrow, concave inner margins of lobes facing each other, partially obscuring proctiger and slightly exceeding ventral apical margin but not reaching apices of lateral apical lobes; central portion of ventral apical margin convex-arcuate, lateral portions somewhat tumid; submarginal impression rather deep, rotund.

This species averages 10.0 mm. in length; 5.5 mm. in width across greatest diameter.

TYPE MATERIAL: Holotype, female; Mexico; deposited in the Naturhistoriska Riksmuseum, Stockholm.

DISTRIBUTION: Mexico. Costa Rica: Turrialba.

REMARKS: Among the various species of *Discocephalessa,* this form appears to be the largest. It is differentiated from a number of others by the absence of a transverse furrow across the disc of the pronotum.

Discocephalessa humilis (Herrich-Schaeffer), new combination

Discocephala humilis HERRICH-SCHAEFFER, 1843, p. 39, fig. 716. FIEBER, 1851, p. 454. STÅL, 1868, p. 18 (under subgenus *Platycarenus*); 1872, p. 6. DISTANT, 1880 (1880–1893), p. 45, pl. 4, fig. 22. LETHIERRY AND SEVERIN, 1893, p. 84.
Platycarenus (Discocephalessa) humilis: KIRKALDY, 1909, p. 215.

DIAGNOSIS: Less than 10.0 mm. in length; pronotum with shallow transverse furrow across disc behind cicatrices; scutellum with three minute pale points across basal margin.

SPECIFIC CHARACTERS: Sordid flavescent, with dense, brown to piceous punctures and numerous fine flavescent flecks over dorsal surface.

Head standard for genus, slightly sinuate before eyes, punctures dense, evenly distributed. Pronotum with transverse discal furrow. Pronotum, scutellum, and coria with widely scattered, minute, pale, glossy points. Basal margin of scutellum with three somewhat more conspicuous pale points, behind each of which is a small cluster of piceous punctures. Hemelytral membranes dull, medium brown, veins darker, apical margin of membrane paler, with short, longitudinal, darker stripes between veins. Connexivum flavescent, incisures with rectangular black spot. Legs pale flavescent, conspicuously spotted with small, blackish brown dots.

TYPE MATERIAL: Not examined.

DISTRIBUTION: Colombia.

REMARKS: The diagnostic and specific characters given above were abstracted from Herrich-Schaeffer's original description and Fieber's

(1851) redescription. Unfortunately, I have been unable to find the type specimen, or specimens, and thus am unable to make personal observations regarding this species. Furthermore, I have not seen any specimens of this genus from Colombia, the type locality.

I have been making an intensive study of a moderately large series of specimens from the United States National Museum of the Smithsonian Institution which have been lumped together under the general heading of *Platycarenus humilis* (Herrich-Schaeffer). Smaller collections from several European museums have also been investigated. In these accumulations, the specimens range in distribution all the way from Rio de Janeiro to Ecuador, Panama, Costa Rica, Guatemala, and Mexico, but not including Colombia. Superficially, all of these are alike in appearance, indeed are almost identical in color and markings, differing from one another in only the most subtle, essentially undescribable ways. Yet, in the course of this investigation, great differences in their pygofers have been observed, and, to date, 11 distinctly different patterns of parameres and other component parts have been established. By no stretch of the imagination could all these patterns represent variations of one single species; the differences are too great. Now, having been unable to study a male specimen of the true *humilis,* I am at a loss to know which, if any, of the 11 patterns might belong to that species. In the Breddin collection, there is a single male specimen which he (Breddin) identified as *P. humilis.* Whether or not Breddin compared this individual with Herrich-Schaeffer's type is not known, but certainly the pattern of the pygofer and its parameres is distinctive and differs from any of the 11 mentioned above. Breddin's specimen is labeled as coming from Brazil, but no other data are given. If taken from northwestern Brazil, near Colombia, this specimen may be the true *humilis,* but, if collected from the eastern coastal region, it undoubtedly is not that species at all. Until the true species of *humilis* can be certified, research in this complex must be held in abeyance.

Discocephalessa terminalis (Walker), new combination

Discocephala terminalis WALKER, 1867, p. 186. LETHIERRY AND SEVERIN, 1893, p. 84. KIRKALDY, 1909, p. 215 (listed under "doubtful position").

DIAGNOSIS: Pronotum transversely subrectangular, with shallow furrow across disc and with six irregular flavescent points along anterior margin of furrow; apex of scutellum broadly flavescent; corium with conspicuous, pale, discal spot.

SPECIFIC CHARACTERS: Narrowly ovate, feebly convex above, somewhat flatter beneath; sordid testaceous, densely, rather evenly punctured, punc-

tures medium brown, anterolateral pronotal margins tending to be flavescent with few punctures; beneath sordid flavescent, less densely punctured; sterna and median abdominal area castaneous.

Head almost half again as wide between eyes as long medially, anteocular margins very feebly sinuate, apex broadly rounded, punctures less dense than on pronotum. Antennae reaching basal third of scutellum, vaguely infuscated, irregularly stippled, apical segment ivory; segmental ratios: 20/20/50/50/60, i.e., segment II equal to I, less than half of length of III.

Pronotum subrectangular, little less than two and one-third times as wide as long, anterior margin slightly wider than head through eyes, anterolateral margins feebly explanate toward the anterior, slightly convex-arcuate, nearly straight, anterior apical angles broadly rounded; disc with shallow transverse furrow having parallel row of six, irregular, flavescent points along its anterior margin; two smaller flavescent points on anterior margin near ocelli. Scutellum about one-fifth longer than wide at base, frena slightly exceeding middle, postfrenal margins gradually convergent, apex evenly rounded, conspicuously flavescent; three small, irregular, pale points across base; punctures somewhat unevenly distributed. Hemelytra more regularly punctured, membranes pale smoky brown, basal portion and veins darker, apical margins not exceeding abdominal apex; corium with large, impunctate, pale discal spot and smaller vague one near apical end; external apical angle rectilinear. Connexivum narrowly exposed, flavescent, densely fuscopunctate, incisures broadly banded with fuscous.

Under surface of head almost impunctate. Rostrum testaceous, reaching second visible abdominal sternite, segment II longer than segments III and IV combined. Mesosternum distinctly bilaterally tumid, glabrous, saddle between halves deep, densely punctured. Metasternum narrowly hexagonal, surface impressed, densely punctured. Legs flavescent, femora somewhat incrassate, stippled with brown dots aggregating toward apex; tibiae with brown dots on dorsal surface.

Basal plates of female genital valves equilaterally triangular, apical margins feebly convex-arcuate.

This species averages 8.5 mm. in length; 4.75 mm. in width across humeri.

TYPE MATERIAL: Holotype, female, Amazon region, no date; deposited in the British Museum (Natural History).

DISTRIBUTION: Brazil: Amazonas. Bolivia: Cochabamba.

REMARKS: This is the most easily recognized species in the genus, owing to the conspicuous ivory apex of the scutellum and the transverse row

of six flavescent points across the pronotal disc. Although a male has not been seen, this species has all the characteristics that place it in the genus *Discocephalessa* near *notulata* and its allies.

Discocephalessa sordida (Walker), new combination

Discocephala sordida WALKER, 1867, p. 187. LETHIERRY AND SEVERIN, 1893, p. 84. KIRKALDY, 1909, p. 215 (listed under "doubtful position").

DIAGNOSIS: Pronotum with pair (1 + 1) of posteriorly divergent, narrow, smooth, flavescent stripes behind shallow, transverse, discal furrow; major portion of venter piceous; rostrum reaching middle of abdominal disc.

SPECIFIC CHARACTERS: Ovate, about half again as long as wide, depressed, sordid flavescent to greenish yellow, punctures brown ferruginous, quite irregularly distributed, densest on hemelytra, many arranged in small clusters on pronotum and scutellum, leaving extensive pale areas visible; beneath rather flat, largely piceous, with moderately broad lateral margins of body sordid flavescent, with dense punctures.

Head less than one-fourth wider between eyes than long medially; anteocular margins shallowly sinuate, apex semicircular; eyes globular, directed laterally; punctures moderately dense, somewhat irregularly distributed. Antennae tenebrous, almost black, joints and base of segment V flavescent; segmental ratios 20/25/40/43/?50, i.e., segment II slightly longer than I, more than half of length of III, segment V mutilated in type but measurable in other specimens.

Pronotum subhexagonal, about two and one-half times as wide as long; anterior margin shallowly, truncately excavated to receive head, then truncate behind eyes, anterior apical angles rounded; anterolateral margins feebly convex-arcuate, slightly explanate, subreflexed; shallow transverse furrow across middle of disc; punctures sparsest centrally and near anterolateral margins; pair (1 + 1) of posteriorly divergent, smooth yellow stripes arising from transverse furrow and extending to posterior margin just entad of humeri. Scutellum about one-seventh longer than wide at base, frena extending to middle, postfrenal margins converging to evenly rounded apex; numerous flavescent, smooth areas visible, punctures castaneous, mostly aggregated in small irregular clusters along margins and central portion of disc; short, oblique, calloused, flavescent patch near each basal angle. Hemelytra very densely punctured, most punctures closer together than their own diameters, except on embolium where they are more irregularly disposed; free apical margin of corium straight, external apical angle subobtusely rounded; membranes reaching abdominal apex, smoky, rich medium brown, darkening basally, with pale

arcuate band near middle of membrane; veins conspicuous; disc of corium with two brown patches separated by small flavescent spot. Connexivum moderately exposed, flavescent, punctures ferruginous, apical margin of each segment narrowly brown.

Under side of head sparingly punctured, with conspicuous black spot on base near bucculae. Bucculae hardly elevated anteriorly, only slightly so posteriorly and, there, divergent; buccular canal narrow, shallow. Rostrum testaceous, reaching middle of abdominal disc. Thoracic sterna piceous, pleura flavescent, with fine, dense, piceous punctures. Mesosternum distinctly tumid, with deep, punctured furrow between bilateral halves, xyphus likewise punctured and impressed. Metasternum hexagonal, impressed and punctured. Ostiolar peritreme broadly lanceolate, slightly curved, apex acute reaching about two-thirds of distance across supporting plate. Major portion of abdominal venter dark castaneous, impunctate, lateral margins flavescent, densely fuscopunctate, in some specimens each segment having small, flavescent, triangular patch just within extreme lateral margins; apical angles of connexival segments piceous; median abdominal furrow well developed, wide, moderately deep, extending through third visible segment.

Basal plates of female genital valves triangular, almost equilaterally so, slightly impressed, their apical margins taken together forming arcuate line across abdomen; apical margin of seventh sternite deeply excavated centrally so that lateral portions seem to encircle basal plates.

This species averages 8.75 mm. in length; 5.0 mm. in width across humeri.

TYPE MATERIAL: Lectotype, female; Amazon region, Brazil, no date; deposited in British Museum (Natural History). Paratype, female; same data as for lectotype.

DISTRIBUTION: Brazil: Amazon region. French Guiana: Cayenne.

REMARKS: Two of Walker's specimens are in the British Museum; of these, one more closely conforms to his original description than the other. Therefore, I have selected that one as the lectotype.

In none of the numerous collections examined in other museums did I find a male specimen. Hence it is impossible to compare the male genitalia and thus place this species with any degree of accuracy in relation to others in the genus. That it belongs in *Discocephalessa* is evident from the similarity shown in the mesosternum and metasternum, parts that are like those in *notulata, humilis, terminalis,* and others, as well as by the presence of the broad, piceous or dark castaneous, median, ventral band common to all these species.

Discocephalessa andina (Breddin), new combination

Discocephala andina BREDDIN, 1904, p. 58. KIRKALDY, 1909, p. 215 (listed under "doubtful position").

DIAGNOSIS: Pronotum with shallow transverse furrow and four irregular, subcalloused, flavescent spots; antennae pale, basal four segments conspersed with fine piceous dots, segment V entirely pale.

SPECIFIC CHARACTERS: Narrowly oval; above testaceous, densely overlain with fuscous punctures, about as far apart as their own diameters, in some cases vaguely congested; beneath paler, with finer, very dense, mostly ferruginous punctures; sterna and median portion of abdominal disc dark castaneous or piceous.

Head one-fourth wider between eyes than long medially, anteocular margins weakly sinuate, gradually arcuate to evenly rounded apex; punctures regularly distributed. Antennae pale flavescent, basal four segments densely stippled with fine fuscous or piceous dots, terminal segment entirely flavescent; segmental ratios: 20/30/30/40/50, i.e., segment II slightly longer than I, equal to III.

Pronotum subhexagonal, slightly more than two and one-half times as wide as long, anterior apical angles obtusely rounded; anterior margin slightly wider than head through eyes, subtruncately excavated centrally to receive head; anterolateral margins very feebly explanate, pale, with fewer larger punctures; disc with shallow transverse furrow behind cicatrices and four subcalloused flavescent, small spots. Scutellum one-fourth longer than wide at base, punctures dense, some congested near lateral margins; frena ending just behind middle, postfrenal margins gradually convergent, apex moderately rounded, usually pale, impunctate. Hemelytral membranes slightly exceeding abdominal apex; punctures on corium dense, rather regularly distributed; fewest and largest punctures along basal margin of embolium; corium with pale, impunctate, discal spot; membranes pale smoky brown, darkening toward base, veins prominent, somewhat irregular and bifurcated. Connexivum narrowly exposed, flavescent, punctures moderately dense, segmental sutures bordered with fuscous; apical portion of tergum black, densely and finely punctured.

Venter paler than dorsum, punctures denser and finer. Mesosternum prominently bilaterally tumid, glabrous, with distinct punctured saddle between halves. Metasternum narrowly hexagonal, shallowly impressed, sparingly punctured. Legs flavescent, with coarse ferruginous and fuscous dots, tarsi totally pale. Lateral margins of central piceous portion of abdominal disc irregularly erose; median abdominal furrow vague; margins of fifth, sixth, and seventh sternites as given in generic description.

Pygofer subglobular, similar in pattern as described in section on Special Morphology dealing with types of pygofers; lateral apical lobes with small, obtuse, anteapical notch on their inner margins; apical faces of parameres flavescent, turned inward over face of proctiger, and having three stout, black acute cusps.

This species averages 8.75 mm. in length; 4.5 mm. in width across humeri.

TYPE MATERIAL: Holotype, male; Balzampamba, no date; Ecuador; deposited in Deutsches Entomologisches Institut, Eberswalde.

DISTRIBUTION: Ecuador: Balzampamba; Chimbo.

REMARKS: This species is closely related to *notulata* and *humilis.* The distinctive pattern of the parameres sets it off from all other species in the genus. Although placed in *Platycarenus* by Breddin, *andina* rightfully belongs in the genus *Discocephalessa.*

LINEOSTETHUS, NEW GENUS

Figures 2, 9, 12, 17, 18

TYPE SPECIES: *Discocephala clypeata* Stål.

DIAGNOSIS: Metasternum subrhomboidal, rather small, with median, thin, raised line; anteocular margins not sinuate, or very feebly so.

GENERIC CHARACTERS: Ovate, not more than 10.0 mm. in length; weakly convex above, flat beneath. Head subequal to median length of pronotum, one-third wider between eyes than long medially, anteocular margins not, or only feebly, sinuate, apex entire, semicircularly rounded. Antennae reaching to basal third of scutellum, segment II equal to, or slightly longer than, segment III.

Pronotum subhexagonal, about two and one-third times as wide as long medially; anterior margin shallowly excavated to receive head; anterior apical angles roundly obtuse, without minute lateral denticle; anterolateral margins straight, entire, not at all explanate. Scutellum weakly convex, about one-fourth longer than wide at base, frena ending slightly behind middle, postfrenal margins gradually converging to evenly rounded apex. Hemelytral membranes reaching apex of abdomen, barely exceeding it; embolium distinctly narrower than corium. Connexivum rather widely exposed, segmental apical angles rectilinear, not produced. Apical margin of seventh abdominal tergite in male moderately and evenly excavated, with very narrow transverse membrane, without median retrorse process or lobe.

Bucculae low, subparallel, slightly divergent posteriorly; buccular canal shallow. Rostrum barely exceeding posterior coxae, segment IV distinctly shorter than segment III. Mesosternum weakly tumid, with narrow, shal-

low, longitudinal sulcus between halves; xyphus with short, median, raised line. Metasternum subrhomboidal (fig. 2), basal and apical margins very narrow, almost angular, disc flat, with percurrent, median, low, raised line contiguous with the one on xyphus. Ostiolar peritreme (fig. 12) lanceolate, apical third curved anteriorly, attenuated in acute apex, approaching anterior margin of metapleuron. Basal (anterior) margin of seventh abdominal sternite (fig. 9) produced forward in narrowly rounded arc of about 80 degrees, just about reaching middle of abdominal disc; basal margin of sixth sternite obtusely arcuate, almost semicircular. Apical margin of seventh sternite in male moderately excavated, central portion tending to become truncate.

Basal plates of female genital valves subtriangular, or subtrapezoidal, a little wider than long, all angles rounded, apical margins truncate.

Pygofer (figs. 17, 18) subglobular, lateral apical lobes *per se* lacking; dorsolateral portion of capsule with pair (1 + 1) of posteriorly produced, flat, transluscent plates extending over genital cup. Other details as described in section on Special Morphology dealing with types of pygofers.

REMARKS: The name *Lineostethus* is used to imply the existence of a percurrent, thin, raised line of the xyphus and metasternum.

Three forms apparently belong to this genus. They are *clypeatus* (Stål), *marginellus* (Stål), and *tenebricornis* (Ruckes). Of these, *marginellus* seems to be a subspecies of *clypeatus;* I find no differences whatsoever between the component parts of the pygofers of these two. They are distinguishable from each other only by the fact that *clypeatus* is slightly smaller than *marginellus,* has its punctures on the pronotum and hemelytra extending all the way to the extreme lateral margins of those parts, and has a somewhat elongated, pale discal spot, whereas in *marginellus,* the punctures stop short of the extreme lateral margins, leaving those areas pale, and the discal spot on the corium is rotund. Such minor differences are hardly great enough for the separation of the two as distinct species.

KEY TO THE SPECIES OF *Lineostethus*

1. Antennae pale, basal three segments with thin, black, longitudinal stripes; small ring of punctures laterad of each cicatrix 2
   Antennae uniformly tenebrous, neither stippled nor lineated; pronotum without ring of punctures laterad of cicatrices . . . . . *tenebricornis* (Ruckes)
2(1). Anterolateral pronotal margins and basal costal margins of hemelytra punctured to their extreme edges; pale discal spot on corium elongated and placed slightly obliquely; species about 8.0 mm. in length . . . . . *clypeatus clypeatus* (Stål)
   Anterolateral pronotal margins and basal costal margins narrowly im-

punctate, pale; discal spot on corium rotund; species about 8.25 mm. in length..... *clypeatus marginellus* (Stål)

Lineostethus tenebricornis (Ruckes), new combination

Platycarenus (Discocephalessa) tenebricornis RUCKES, 1957, p. 16.

DIAGNOSIS: Antennae tenebrous, neither stippled nor lineated; pronotum without ring of punctures laterad of each cicatrix; punctures on venter not confined to lateral areas.

SPECIFIC CHARACTERS: The salient features of this species were given at length in the original description; detailed characteristics of the external genitalia, omitted from the original, are added here.

Basal plates of female genital valves subtrapezoidal, their angles rounded.

Pygofer subglobular; transluscent plates projecting from dorsal border, subtriangular in outline, inner margins slightly convex-arcuate, shorter than outer margins, hiatus between plates sublyriform in outline; lateral apical corners of capsule acutely angled; proctiger declivous, cylindrical; parameres narrowly triangular in lateral aspect, erect, outer surface of each with thin, oblique carina, in apical aspect linear, with slight sigmoid curvature, so that taken together the two form a lyriform figure, apices acuminate, slightly surpassing dorsal surface of capsule.

This species averages 8.25 mm. in length; 4.75 mm. in width across humeri.

TYPE MATERIAL: Holotype, male; Madera Canyon, Santa Rita Mountains, Pima County, Arizona; August 13, 1952. Allotype, female; same data as for holotype. Paratypes, 29; same data as for holotype. All deposited in the American Museum of Natural History.

DISTRIBUTION: United States: Arizona; Pima County, Cochise County.

REMARKS: This is one of the very few discocephaline pentatomids occurring in the United States. Specimens have usually been taken from the axils of fleshy *Agave* leaves, a succulent very common in southern Arizona.

Lineostethus clypeatus clypeatus (Stål), new combination

Figures 2, 9, 17, 18

Discocephala clypeata STÅL, 1862, p. 96; 1868, p. 18 (under subgenus *Platycarenus*); 1872, p. 6 (under subgenus *Platycarenus*). DISTANT, 1880 (1880–1893), p. 45, pl. 6, fig. 1. UHLER, 1886, p. 5. LETHIERRY AND SEVERIN, 1893, p. 83. BANKS, 1910, p. 92.

Discocephala inobtrusa WALKER, 1867, p. 183.

Platycarenus (Discocephalessa) clypeatus: KIRKALDY, 1909, p. 215.

DIAGNOSIS: Antennae pale, longitudinally lineated with black; anterolateral pronotal margins and basal costal margins of hemelytra punctured to extreme edges; pale discal spot on corium somewhat elongate, placed obliquely.

SPECIFIC CHARACTERS: Narrowly ovate, mildly convex above, flat beneath; sordid flavescent, punctures ferruginous, fine, rather evenly distributed, about as far apart as their own diameters; paler beneath, punctures ferruginous, confined to lateral areas, sparse, and irregularly distributed.

Head slightly shorter than median length of pronotum, about one-third wider between eyes than long medially; anteocular margins very feebly sinuate, apex evenly, semicircularly rounded. Antennae pale, basal three segments with thin, longitudinal, black stripes; segmental ratios: 12/30/35/40/40, i.e., segment II much longer than I, subequal to III.

Pronotum subhexagonal, slightly less than two and one-fourth times as wide as long; anterior margin very shallowly excavated to receive head; anterior apical angles roundly obtuse, without minute denticle; anterolateral margins straight, thin; punctures arranged in short, irregular, wavy, transverse lines, extending to extreme lateral margins. Scutellum about one-fourth longer than wide at base, frena ending at middle, postfrenal margins weakly converging to somewhat broad, subangular apex; punctures rather irregularly disposed, some arranged in short transverse lines; in a number of cases a piceous, subrhomboidal patch appearing on disc. Hemelytra not exceeding abdominal apex, punctures more regularly arranged; pale, impunctate, oval discal spot on corium placed slightly obliquely; membranes pale, smoky, veins darker. Apical margin of seventh abdominal tergite in male moderately, evenly excavated.

Venter flavescent, punctures confined to lateral areas of thorax and abdomen, somewhat sparingly distributed, head almost impunctate. Rostrum pale, with median dark stripe, reaching apical margin of first visible abdominal segment; abdominal furrow vague; anterior (basal) margin of seventh abdominal sternite in male (fig. 9) produced into narrow arc of about 70 degrees, reaching middle of disc. Legs flavescent, apical half of femur and dorsal (sulcate) surface of tibiae with prominent ferruginous dots; tarsi uniformly pale.

Basal plates of female genital valves flat, triangular, essentially equilateral, angles feebly rounded.

Pygofer (figs. 17, 18) as described in section on Special Morphology dealing with types of pygofers. Plates extending from dorsal border subquadrangular, lateral margins slightly shorter than inner margins, hiatus between plates somewhat horseshoe-shaped; lateral apical angles of cap-

sule subobtusely rounded, in a few cases subangular; parameres narrowly triangular in lateral aspect, vertical, in apical aspect linear, parallel to each other, their apices acuminate, reaching level of dorsal border of capsule.

This species averages 8.0 mm. in length; 4.0 mm. in width across humeri.

TYPE MATERIAL: Holotype, female; Mexico, no date; deposited in the Naturhistoriska Riksmuseum, Stockholm.

DISTRIBUTION: Mexico; Tamazunchale, Pasomodela, Chichen Itza. Guatemala: San Jeronimo, Tucuru. Costa Rica. British Honduras: Rio Hondo. Panama: Matachin.

This subspecies of *clypeatus* appears to occupy a more southern range in distribution than does the subspecies *marginellus.*

Lineostethus clypeatus marginellus (Stål), new combination

Discocephala marginella STÅL, 1872, p. 6 (under subgenus *Platycarenus*). DISTANT, 1880 (1880–1893), p. 45, pl. 5, fig. 2. UHLER, 1886, p. 5. LETHIERRY AND SEVERIN, 1893, p. 84. BANKS, 1910, p. 92.

Platycarenus (*Discocephalessa*) *marginellus:* KIRKALDY, 1909, p. 216.

DIAGNOSIS: Anterolateral margins of pronotum and basal margins of hemelytra impunctate; discal spot on corium rotund.

SPECIFIC CHARACTERS: Characters identical to those in the preceding subspecies except as noted in above key and diagnosis.

This subspecies averages 8.5 mm. in length; 4.24 mm. in width across humeri.

TYPE MATERIAL: Holotype, male; allotype, female; Mexico, no date; deposited in the Naturhistoriska Riksmuseum, Stockholm.

DISTRIBUTION: United States: Texas; Brownsville, Laredo. Mexico: Monterey; Vera Cruz.

REMARKS: *Marginellus* appears to occupy a more northern territory than the typical species, *clypeatus.*

UNICRUS, NEW GENUS

Figures 4, 23, 24, 25

TYPE SPECIES: *Discocephala Kollarii* Fieber.

DIAGNOSIS: Hind femora with anteapical uncinate process (in some cases reduced in female); mesosternal sulcus shallow, with a few scattered fuscous punctures; metasternum narrowly hexagonal, with percurrent, low, thin, median raised line.

GENERIC CHARACTERS: Broadly oval, moderately convex above, rather flat beneath; dorsal surface glossy, quite smooth, punctures shallow. Head shorter than median length of pronotum, slightly shorter than width between eyes, anteocular margins distinctly sinuate, apex semicircular. Antennae surpassing base of scutellum.

Pronotum subhexagonal, anterolateral margins straight; anterior apical angles obtuse, each with minute, laterally directed, acute denticle. Scutellum stout, about one-third longer than wide at base, apex obtusely subangular; postfrenal margins essentially parallel to each other. Hemelytra reaching apex of abdomen, free apical margin of corium feebly convex-arcuate, external apical angles of corium rounded. Connexivum well exposed, segmental apical angles acute, subspinous, somewhat produced.

Apical margin of terminal abdominal tergite in male (fig. 25) deeply emarginate, with large, somewhat flattened, retrorse, median lobe, lateral of which margin impressed and bordered with a thick membrane; median retrorse lobe truncate-triangular.

Bucculae low, uniform in height; buccular canal shallow, broad. Rostrum reaching apical margin of second visible abdominal segment, basal segment not quite reaching procoxae. Mesosternum feebly tumid, with shallow median sulcus with a few scattered fuscous punctures; xyphus with short, thin, raised line. Metasternum narrowly hexagonal, basal and apical margins somewhat narrowed but not subangular, disc rather flat, with thin, raised median line, contiguous with raised line on xyphus. Ostiolar peritreme scalpeliform, slightly curved, ending near middle of supporting plate. Hind femora with anteapical uncinate process, in some female specimens reduced to prominent tubercle.

Anterior (basal) margin of seventh abdominal sternite in male (fig. 4) produced forward into acicular angle of less than 30 degrees, reaching middle of disc; basal margin of sixth sternite acutely angled, almost severed by median angle of seventh sternite, basal margin of fifth sternite broadly arcuate; apical margin of seventh sternite in male rather deeply, evenly emarginate (fig. 4).

Basal plates of female genital valves subtrapezoidal, about as wide as long, apical margins truncate, and, when taken together, forming straight line near apex of abdomen.

Pygofer (figs. 23, 24) ovate; details described in section on Special Morphology dealing with types of pygofers.

REMARKS: The name *Uncicrus* was selected for this genus to imply the presence of a hooklike process near the apex of each posterior femur.

Uncicrus kollarii (Fieber), new combination

Figures 4, 23, 24, 25

Discocephala kollarii FIEBER, 1851, p. 454. LETHIERRY AND SEVERIN, 1893, p. 84.
Platycarenus (Discocephalessa) kollarii: KIRKALDY, 1909, p. 216.
Platycarenus uncinatus RUCKES, 1960, p. 10.

DIAGNOSIS: Apical margin of terminal tergite in male with large, apically truncate, triangular, retrorse process; antennal segment II shorter than III; dorsal surface quite glossy, smooth.

SPECIFIC CHARACTERS: Oval, glossy; above and beneath flavescent, punctures fine, dense, dark brown, fewest on median ventral portion; large irregular castaneous patch on basal portion of terminal abdominal sternite in male, somewhat smaller in female.

Head roundly triangular, somewhat shorter than wide between eyes; anteocular margins sinuate; punctures very dense, closer together than their own diameters, sparsest on vertex, ocelli more than twice as far apart as distant from eyes. Antennae reaching slightly beyond base of scutellum, flavescent, basal three segments finely stippled with fuscous dots, basal half of segment IV stippled, apical half flavescent, basal half of segment V flavescent, apical half infuscated, joints pale; segmental ratios: 30/40/58/60/60, i.e., segment II longer than I, about two-thirds of the length of III.

Pronotum subhexagonal, humeri subumbonate, disc rather convex, punctures slightly less dense than on head, irregularly distributed; anterior margin barely excavated to receive head; anterolateral margins straight, thin, very narrowly carinate. Scutellum evenly convex, punctures irregularly distributed, least dense on median area; frena ending just before middle, apex obtusely rounded, in some specimens subangular. Hemelytra very densely punctured, more regular on embolium than on corium; external apical angle of corium acutely rounded. Connexivum flavescent, densely ferruginopunctate; lateral margin and acute angle of each segment piceous, with small flavescent spot just before each angle, angles distinctly produced.

Apical margin of seventh abdominal tergite in male (fig. 25) deeply emarginate, with flat, stout, truncately triangular, retrorse process or plate; margin each side of process conspicuously impressed, bordered with stout membrane; apical angles of segment acute, but not conspicuously produced.

Under surface of head and thoracic pleura regularly punctured; thoracic sterna impunctate except for a few scattered ferruginous punctures in shallow, median, mesosternal sulcus; punctures on abdomen becoming denser and finer laterally; median abdominal furrow shallow, vague.

Legs flavescent, femora and tibiae more or less uniformly dotted with fuscous spots, tarsi uniformly flavescent.

Pygofer (figs. 23, 24) ovate, as described in section on Special Morphology dealing with types of pygofers.

This species averages 10.5 mm. in length; 6.5 mm. in width across humeri.

TYPE MATERIAL: Holotype, male; Brazil; no date; deposited in the Naturhistorisches Museum, Vienna.

DISTRIBUTION: Brazil: Parana.

REMARKS: Thus far, this is the only example of the old *Platycarenus* complex that has a retrorse median process, or plate, on the apical margin of the terminal abdominal tergite in the male, and an uncinate process on the under side of each posterior femur, characters that alone are sufficient to establish this form as a new genus. The nature of the mesosternum with its shallow, sparsely punctured median sulcus, and the metasternum with its thin, low, raised median line apparently place this genus between *Discocephalessa* on the one hand, and *Lineostethus* on the other.

ALLINOCORIS, NEW GENUS

TYPE SPECIES: *Discocephala nubila* Dallas.

DIAGNOSIS: Dorsal surface semimatte, slightly uneven, with several clouds of fuscous punctures; hind femur without uncinate process; metasternum flat, with thin, median, raised line.

GENERIC CHARACTERS: Elongate oval, about twice as long as wide; head slightly shorter than wide between eyes, anteocular margins distinctly sinuate, apex semicircularly rounded; antennal segment II more than half of length of III.

Pronotum hexagonal, anterior apical angles with minute, laterally directed, acute denticle; anterolateral margins distinctly carinate, subreflexed; vague transverse furrow across disc just behind cicatrices; punctures quite dense. Scutellum about one-third longer than wide at base, apex evenly rounded.

Bucculae barely elevated. Rostrum attaining basal margin of first visible abdominal segment. Mesosternum mildly tumid, with shallow, median furrow having a few scattered, ferruginous punctures, xyphus quadrangular, with thin, median, raised line. Metasternum hexagonal, with thin, median, raised line contiguous with one on xyphus. Ostiolar peritreme scalpeliform, apex bluntly rounded, ending two-thirds of distance across plate.

REMARKS: I have chosen the name *Allinocoris* to signify the mottled and bedaubed appearance of this form.

Allinocoris nubilus (Dallas), new combination

Discocephala nubila DALLAS, 1851, p. 147. LETHIERRY AND SEVERIN, 1893, p. 84. KIRKALDY, 1909, p. 215 (listed under "doubtful position").

DIAGNOSIS: Dorsal surface with numerous cloudlike clusters of fuscous punctures; pair (1 + 1) of minute, flavescent, subcalloused points near end of tylus; dorsal surface somewhat uneven, semiglossy.

SPECIFIC CHARACTERS: Elongate-oval; above semimatte, slightly roughened, sordid flavescent, rather dense and regularly distributed fuscous punctures on head and pronotum, less regularly disposed on scutellum and hemelytra; beneath paler flavescent, punctures on thoracic pleura fuscous, quite dense, those on abdomen ferruginous, becoming finer and denser laterally, median portion very sparingly punctured.

Head slightly shorter than wide between eyes, anteocular margins distinctly sinuate, leaving minute, obtuse tubercle at base of eyes, apex semicircularly rounded; punctures quite dense, regularly distributed, two (1 + 1) small, irregular, subcalloused points near end of tylus; eyes dull reddish; ocelli twice as far apart as distant from eyes. Antennae finely setulose, sordid testaceous, all segments covered with fine fuscous stipples; segmental ratios: 20/35/50/60/60, i.e., segment II more than half of length of III.

Pronotum hexagonal, anterior margin shallowly, truncately excavated centrally to receive head, then truncate behind eyes and ending laterally in minute acute denticle; anterolateral margins straight, distinctly carinate, subreflexed; vague, shallow, transverse furrow across disc; punctures fuscous, about twice as far apart as their own diameters, slightly finer and denser laterally, interhumeral punctures tending to be arranged in transverse lines. Scutellum about one-third longer than wide at base, basal angles calloused, flavescent, punctures fuscous, somewhat irregular, with dense clusters near base and in region where frena end; punctures sparsest at apex; apex moderately rounded. Hemelytra irregularly punctured, with dense, conspicuous, subquadrate cluster of punctures on corium near end of main vein, several irregular brown clouds evident; free apical margin of corium straight, external apical angle obtusely rounded; membranes reaching apex of abdomen, almost transparent amber, with rich brown coloring at base, veins darker. Connexivum barely exposed, testaceous, densely ferruginopunctate, segmental sutures narrowly infuscated.

Under surface of head finely, densely punctured. Bucculae barely elevated; buccular canal narrow, shallow. Rostrum reaching basal margin of first visible abdominal segment, basal segment not quite attaining procoxae. Mesosternum moderately tumid, with shallow, median furrow

or sulcus bearing some scattered, fine, ferruginous punctures; xyphus subquadrangular, with short, thin, median, raised line. Metasternum narrowly hexagonal, flat, with percurrent, thin, raised, median line contiguous with one on xyphus. Median abdominal furrow vague, shallow, extending to base of sixth sternite. Ostiolar peritreme scalpeliform, apex bluntly rounded, ending about two-thirds of distance across metapleuron.

Basal plates of female genital valves quite large, almost obscuring apical plates, quadrangular, with obtusely rounded angles, ental margins contiguous for entire length; visible margins of apical plates truncate, slightly exceeding apical margin of abdomen.

This species measures 10.5 mm. in length; 5.25 mm. in width across humeri.

TYPE MATERIAL: Holotype, female; Brazil; no date; deposited in the British Museum (Natural History).

DISTRIBUTION: Brazil.

REMARKS: The only example of this species I have seen is the type specimen in the British Museum. The absence of a male prevents pinpointing the exact phyletic position of the species. That the genus and species are closely related to *Uncicrus kollarii* is evident from the presence of a minute denticle on each anterior apical angle of the pronotum, the similarity in the nature of the mesosternum, xyphus, and metasternum, and a rostrum that barely surpasses the metacoxae.

ALVEOSTETHUS, NEW GENUS

Figures 3, 8, 19, 20, 26

TYPE SPECIES: *Discocephala latifrons* Dallas.

DIAGNOSIS: Ovate, 8.5 mm. to 10.0 mm. in length; metasternum impunctate, lateral margins thickened, elevated, longitudinally furrowed, or deeply sulcate to form a canal in which terminal segments of rostrum lie; margin of body from apex of head to base of hemelytron forming more or less an even, continuous arc (fig. 26).

GENERIC CHARACTERS: Head at least one-third wider between eyes than long, about two-thirds of median length of pronotum; apex subtriangularly rounded. Antennae finely, densely setulose, segment II longer than I, usually subequal to III. Anteocular margin not, or very vaguely, sinuate.

Pronotum subhexagonal, about two and one-half times as wide as long; anterior margin as wide as head through eyes, shallowly sinuate, having intramarginal transverse, impressed line, or shallow furrow, anterior apical angles obtusely rounded, without denticles; anterolateral margins essentially straight, entire, confluent with humeri. Scutellum moderately

convex, one-fourth longer than wide at base, frena ending at middle, postfrenal margins gradually converging to form evenly rounded (in some instances subangular) apex. Hemelytra reaching end of abdomen, lateral margins feebly ampliate opposite third abdominal segment; external apical angle of corium subrectilinear. Connexivum mildly exposed, segmental apical angles rectilinear, not produced. Apical margin of terminal abdominal tergite in male evenly, moderately excavated.

Bucculae low, uniform in height, subparallel anteriorly, divergent posteriorly; buccular canal shallow, narrow. Rostrum not exceeding second visible abdominal segment, basal segment barely attaining procoxae, second segment not surpassing mesocoxae and about one-third longer than lengths of segments III and IV combined. Mesosternum weakly tumid, its longitudinal sulcus vague, or obsolescent, without median raised line on xyphus. Metasternum (fig. 3) narrowly hexagonal, in some cases anterior margin shorter than posterior, lateral margins thickened and elevated so that disc has a longitudinal fusiform furrow, or wide, deep, semicylindrical trough, the apical end of which is open and in which terminal two rostral segments repose. Ostiolar peritreme lanceolate, with slight curvature, apex acute, ending beyond middle of metapleuron. Median portion of basal (first visible) abdominal segment with feeble umbo, but not a distinct tubercle; median rostral furrow obsolete. Anterior (basal) margin of seventh abdominal sternite in male (fig. 8) produced forward into acute angle ranging from 40 degrees to 60 degrees, reaching middle of abdominal disc; median angle of sixth sternite rectilinear to subacute. Apical (posterior) margin of seventh sternite in male rather deeply excavated, tending to become truncate centrally; apical angles of segment rectilinear.

Basal plates of female genital valves coplanar with surface of abdomen, facing ventrally, trapezoidal, apical margins feebly sinuate; apical plates small, not exceeding apical margin of abdomen.

Pygofer (figs. 19, 20) ovate to broadly ovate; details described in text on individual species, and in section on Special Morphology dealing with types of pygofers.

REMARKS: The generic name *Alveostethus* was chosen to emphasize the deeply furrowed or troughlike nature of the metasternum.

KEY TO THE SPECIES OF *Alveostethus*

1. Eyes sloping posteriorly over apical corners of pronotum; ocelli in line with middle of eyes; scutellum very smooth, with large, piceous, discal spot and conspicuous ivory apex; anterior margin before intramarginal groove impunctate, subcalloused; metasternum small, subrhomboidal, with median fusiform sulcus..... *politus* (Signoret)

Eyes directed laterally, not sloping posteriorly over apical corners of pronotum; ocelli in line with posterior margins of eyes; scutellum unadorned, or with only vague clouding, apex and disc concolorous; anterior margin before intramarginal groove finely punctured, not subcalloused; metasternum stout, narrowly hexagonal, median trough quite deep, open at posterior end 2

2(1). Scutellum with irregular, vague, dark discal cloud, posterior margin of which may, in some specimens, continue posteriorly as median dark stripe ..... *pseudopolitus* (Ruckes)

Scutellum without dark cloud, or discal spot, or otherwise adorned 3

3(2). Pronotum distinctly convex, transversely rugulose, rugae coarse, elevated, subcalloused, flavescent between black punctures; three small flavescent calloused points near anterior margin; scutellum distinctly shorter than coria ..... *rugulosus* (Fieber)

Pronotum subdepressed, or very feebly convex, without transverse rugae or flavescent points near anterior margin; scutellum almost as long as coria ..... *latifrons* (Dallas)

Alveostethus politus (Signoret), new combination

Figures 3, 20

Discocephala polita SIGNORET, 1851, p. 33, pl. 10, fig. 7. STÅL, 1868, p. 18 (under subgenus *Platycarenus*); 1872, p. 6 (under subgenus *Platycarenus*).

Discocephala notata WALKER, 1867, p. 187.

Platycarenus (*Discocephalessa*) *politus:* KIRKALDY, 1909, p. 216.

DIAGNOSIS: Glossy, smooth; eyes sloping posteriorly over anterior corners of pronotum; scutellum with large piceous discal spot and broad ivory apex.

SPECIFIC CHARACTERS: Ovate, convex above, rather flat beneath; flavescent, with dense, fine, evenly distributed, shallow, ferruginous punctures; legs faintly stippled with ferruginous dots.

Head broadly and roundly subtriangular, about half again as wide between eyes as long medially, one-fifth shorter than median length of pronotum; eyes somewhat triangular from dorsal aspect, sloping backward, their posterior ends slightly surpassing posterior margin of head, lying appressed to anterior corners of pronotum; disc flat, anteocular margins hardly sinuate, apical margin entire; ocelli on line passing through middle of eyes. Antennae finely setose, pale flavescent, basal three segments vaguely stippled; segmental ratios: 15/20/40/50/60, i.e., segment II half of length of III, all segments progressively elongating.

Pronotum transversely subelliptical, about two and one-half times as wide as long; anterolateral margins feebly convex-arcuate; posterior and posterolateral margins forming continuous arc, i.e., posterior angles obsolete; puncturation quite dense, punctures as far apart as their own

diameters, quite evenly distributed, tending to be arranged in transverse lines; anterior margin as wide as head through eyes, shallowly emarginate centrally to receive head, with thin, intramarginal impressed line, leaving anterior margin impunctate, assuming form of a yoke. Scutellum one-fifth longer than wide at base, frena ending at middle, postfrenal margins gently convergent, apex relatively broadly, evenly rounded, impunctate, totally ivory; disc with conspicuous brown or piceous spot. Hemelytra densely, evenly punctured, small ivory discal spot on corium; free apical margin of corium straight, external apical angle usually angulate, in some specimens subobtusely rounded; membranes reaching apical margin of abdomen, hyaline, rich brown at base, veins concolorous. Connexivum narrowly exposed, uniformly flavescent, densely ferruginopunctate, segmental apical angles rectilinear, not produced. Apical margin of seventh abdominal tergite in male deeply, evenly excavated, having very narrow transverse membrane.

Metasternum subpentagonal, anterior margin much narrower than posterior; lateral margins thickened, slightly elevated, median sulcus fusiform, distinct, but not very deep (fig. 3).

Basal (anterior) margin of seventh abdominal sternite in male produced forward into acuminate angle (30° or less) reaching, at least, middle of disc; basal margin of sixth sternite acutely angled, corresponding margin of fifth sternite centrally truncate.

Basal plates of female genital valves trapezoidal, external apical angles obtusely rounded, apical margins vaguely sinuate; apical plates small.

Pygofer (fig. 20) ovate, uniformly convex; central portion of dorsal border feebly produced, vaguely sinuate; genital cup quite shallow; lateral apical lobes stout, somewhat triangular, upper surfaces weakly concave, slightly divergent, apical margins truncate, slightly exceeding parameres; ventral apical margin between lobes weakly reflexed, sinuate; submarginal impression shallow, somewhat lunate; proctiger quite stubby, broad, almost globular; parameres stout, horizontal, upper surfaces flat, oblong, ventral surfaces with vague, obtuse, median ridge, longitudinal axes somewhat arcuate, convergent apically.

This species averages 9.5 mm. in length; 5.0 mm. in width across humeri.

TYPE MATERIAL: Holotype, female; Colombia; no date; deposited in the Naturhistorisches Museum, Vienna.

DISTRIBUTION: Colombia. Peru: Tingo Maria. Venezuela: Caracas. Brazil: Bahia; Amazonas.

REMARKS: This rather widely distributed discocephaline is probably one of the most easily recognized species in the subfamily owing to its

flavescent color, large scutellar spot, and ivory scutellar apex. Unlike its close relatives, the lateral apical lobes of the pygofer are short and stout, with apices that surpass the parameres by only a small amount.

Alveostethus rugulosus (Fieber), new combination

Discocephala rugulosa FIEBER, 1851, p. 454. STÅL, 1872, p. 6. LETHIERRY AND SEVERIN, 1893, p. 84.

Platycarenus (Discocephalessa) rugulosus: KIRKALDY, 1909, p. 216.

DIAGNOSIS: Pronotum convex, densely, finely punctured laterally, coarsely, punctured centrally, with transverse flavescent rugae between black punctures; three flavescent calloused spots on anterior margin; scutellum with calloused flavescent spot in each basal angle.

SPECIFIC CHARACTERS: Broadly elliptical; brownish yellow, densely punctured above, semiglossy; venter ochraceous, punctured with black lateral punctures, those on abdomen finer laterally, coarser centrally.

Head roundly triangular, anteocular margins barely sinuate, apex evenly rounded, punctures tending to accumulate laterally, disc flat. Antennae pale, segments I, II, and III finely stippled.

Pronotum subhexagonal, convex; punctures fine, evenly distributed, dense, aggregated in broad band parallel to anterolateral margin, central discal area more coarsely punctured, with transverse flavescent, irregular rugae between punctures producing uneven surface; three small yellow spots on anterior margin. Scutellum distinctly shorter than coria; irregularly punctured, surface slightly uneven, basal angles with small yellow spot; frena ending at middle, apex evenly rounded. Hemelytra unevenly punctured, lateral margins distinctly convex-arcuate near middle; main vein ending in short black stripe on each side of which are smooth yellow flecks; free apical margin of corium feebly sinuate, external apical angle subrectilinear; membranes sordid, transparent, rich brown at base, veins paler brown, with metallic luster. Connexivum ochraceous, with dense black punctures.

Mesosternum weakly tumid, with obsolescent median sulcus. Metasternum narrowly hexagonal, lateral margins well elevated, canal between margins deep, narrow. Legs ochraceous, femora with conspicuous black spots.

This species averages 9.0 mm. in length; 4.5 mm. in width across humeri.

TYPE MATERIAL: Holotype, male; Brazil; no date; deposited in the Naturhistorisches Museum, Vienna.

DISTRIBUTION: Brazil.

REMARKS: Unfortunately, during the examination of the type speci-

men, I failed to make notes and drawings of the male genitalia. However, all other body characteristics indicate that this species belongs with *pseudopolitus,* and *latifrons* in *Alveostethus,* in which the lateral margins of the metasternum are well elevated and the median canal between them is deep.

Alveostethus pseudopolitus (Ruckes), new combination

Platycarenus (Discocephalessa) pseudopolitus RUCKES, 1957, p. 17.

DIAGNOSIS: Venter with longitudinal, fuscopunctate, parallel band on each side of body, extending from head to last abdominal sternite; scutellum without ivory apex, but with irregular, piceous, discal cloud.

SPECIFIC CHARACTERS: To the original description, the following items, which were not included, should be added.

Basal (anterior) margin of seventh sternite in male produced forward into an acute 45-degree angle reaching middle of disc; anterior margin of sixth sternite roundly rectilinear (90°), corresponding margin of fifth sternite broadly arcuate; apical margins of seventh segment mildly excavated.

Mesosternum feebly tumid, median sulcus vague. Metasternum narrowly hexagonal, lateral margins distinctly thickened, inner margins parallel, median sulcus in form of deep canal containing terminal two rostral segments. Median portion of first visible abdominal sternite subumbonate; rostral furrow vague, essentially obsolete.

Pygofer ovate, uniformly convex; central portion of dorsal border produced some distance over base of proctiger, with sinuate apical margin; genital cup quite shallow, with pair (1 + 1) of arcuate fovea at bases of parameres extending to bases of lateral apical lobes; lateral apical lobes elongate, produced beyond apices of parameres, slightly incurved, apices acutely rounded; ventral apical margin between lobes reflexed, truncate centrally; submarginal impression shallow, extending onto inner surfaces of lateral apical lobes; visible portion of proctiger obovate; parameres (in dorsal aspect) horizontal, stout, arcuate around proctiger, basal halves somewhat thickened, slightly expanded, apical halves gradually becoming thinner and convergent, their extreme apices acutely angled.

This species averages 9.0 mm. in length; 5.75 mm. in width across humeri.

TYPE MATERIAL: Holotype, female; Horqueta, Paraguay; December 29, 1938. Paratypes, two females; same data as for holotype. All deposited in the American Museum of Natural History.

DISTRIBUTION: Paraguay: Horqueta; Villa Elisa.

REMARKS: In the original description, I compared this species with

politus because of superficial resemblance of the two. Subsequent studies, however, have indicated that *pseudopolitus* is more closely related to *rugulosus*. The unique tunnel-like impression on each side of the basal plates of the female genital valves, and the specific form of the parameres in the male, readily distinguish this from all other species.

Alveostethus latifrons (Dallas), new combination

Figures 8, 19, 26

Discocephala latifrons DALLAS, 1851, p. 147. LETHIERRY AND SEVERIN, 1893, p. 84. KIRKALDY, 1909, p. 215 (listed as of "doubtful position").

DIAGNOSIS: Rather smooth, uniformly punctured, without color design on scutellum, and without transverse rugae on pronotum.

SPECIFIC CHARACTERS: Broadly ovate, rather mildly convex above, flatter beneath. Dark testaceous above and beneath, punctures fuscous, quite dense, most as close together as their own diameters, rather regularly distributed above, except on hemelytra where numerous paler, laevigate flecks are evident; punctures beneath fuscous, sparsest centrally, becoming finer, denser, and slightly paler laterally.

Head subtriangular, about half again as wide between eyes as long, apex less than semicircularly rounded, anteocular margins hardly sinuate, eyes with slightly backward slope. Antennae pale flavescent, basal three segments stippled with fine brown dots, terminal two segments entirely flavescent or lightly infuscated apically; segmental ratios: 20/35/45/50/60, i.e., segment II longer than I, shorter than III.

Pronotum hexagonal, two and one-fourth times as wide as long; anterior margin as wide as head through eyes, feebly excavated centrally to receive head, with vague intramarginal shallow groove; anterolateral margins very feebly convex-arcuate; discal punctures tending to be slightly denser laterally, those toward center arranged in vague transverse lines, but not separated from one another by flavescent, subcalloused rugae; no flavescent calloused spots on anterior margin. Scutellum slightly longer than wide at base, apex somewhat broadly rounded; punctures uniform, regularly distributed, quite dense, as far apart as their own diameters. Hemelytra unevenly punctured, leaving numerous laevigate flavescent spots visible; free apical margin of corium weakly convex-arcuate, external apical angle bluntly rounded; membranes very pale yellow, translucent, darker toward base, veins almost concolorous. Connexivum narrowly exposed, testaceous, very densely ferruginopunctate; neither sutures nor incisures infuscated.

Rostrum sordid flavescent, apex attaining base of abdomen. Mesosternum feebly tumid, median sulcus vague. Metasternum glabrous, flaves-

cent, narrowly hexagonal, lateral margins thickened and elevated, median furrow somewhat fusiform, rather deep. Basal (first visible) abdominal segment subumbonate.

Basal (anterior) margin of seventh abdominal sternite in male produced forward into less than 60-degree angle, reaching middle of disc, median angle of sixth sternite rectilinear or nearly so, corresponding margin of fifth sternite somewhat truncate centrally; apical margin of sternite well excavated, central portion tending to become truncate (fig. 8). Legs flavescent, femora and tibiae conspicuously dotted with coarse, castaneous, or darker spots; tarsi uniformly colored.

Basal plates of female genital valves trapezoidal, about half again as wide as long, lateral margins about two-thirds of length of inner margins, apical margins clearly sinuate; apical plates short, bluntly rounded, barely attaining apical margin of abdomen.

Pygofer (fig. 19) broadly ovate; central portion of dorsal border produced over base of proctiger, its apical margin truncate or very feebly sinuate; genital cup shallow, widely open, lateral portions deeply impressed into capsule beneath dorsal border; lateral apical lobes about as long as capsule, apices truncate, gradually reflexed; ventral apical margin between lobes reflexed, rather evenly concave-arcuate; submarginal impression deep, crescentic; proctiger stout, almost equilaterally triangular, glabrous, castaneous or darker, basal triangular corners set off by virtue of short oblique sulcus, dorsal surface convex, apex very narrowed; parameres very stout, ochraceous, strongly arcuate around proctiger, lateral margins thickened, with small deflexed denticle near middle, apical portions somewhat ampliate, declivous, apices truncate, convergent, meeting one another over ventral apical margin.

This species averages 9.0 mm. in length; 5.5 mm. in width across humeri.

TYPE MATERIAL: Lectotype, male; Brazil: no date; deposited in the British Museum (Natural History).

DISTRIBUTION: Brazil: Rio de Janeiro; Corcovado; Novo Friburgo; Rio Grande do Sul.

REMARKS: I have selected the male specimen of the Dallas material as the lectotype for this species. Unfortunately, no specific locality label is attached to this specimen. The several other specimens that I examined were collected from only the southeastern portion of Brazil. I also designate this species (*latifrons*) as the type species of the new genus *Alveostethus*.

ACCLIVILAMNA, NEW GENUS

Figures 5, 21, 22, 27

TYPE SPECIES: *Discocephala vicina* Signoret.

DIAGNOSIS: Broadly ovate, about 8.5 mm. in length; lateral margins of body from apex of head to bases of hemelytra forming multisinuate line (fig. 27); ocelli minute, in line with posterior margins of eyes; basal plates of female genital valves inclined, facing partially posteriorly; lateral apical lobes of pygofer very short, about one-fourth of length of capsule, parameres globose, protruding.

GENERIC CHARACTERS: Feebly convex above, flat beneath. Head as long as median length of pronotum, about two-thirds wider just before eyes than long medially; anteocular margins distinctly sinuate, leaving small notch at base before eyes; apical margin subsemicircular, disc weakly concave; eyes directed laterally; antennae slightly exceeding base of scutellum.

Pronotum transversely elliptical or narrowly reniform; anterior margin as wide as head through eyes, feebly truncate centrally to receive head, intramarginal furrow narrow, margin before it punctured for entire width; anterolateral margins feebly convex-arcuate, narrowly explanate, ending just before subumbonate humeri, leaving small notch between humeri and bases of hemelytra. Scutellum little less than half again as long as wide at base, frena ending at middle, apex moderately rounded. Hemelytra distinctly ampliate opposite base of abdomen. Connexivum widely exposed, apical angles of segments rectilinear. Apical margin of seventh tergite in male rather deeply, subtriangularly excavated, without median retrorse process or lobe.

Bucculae low, uniform in height, posterior halves divergent; buccular canal shallow, moderately wide. Rostrum attaining first visible abdominal sternite, basal segment not quite reaching procoxae. Mesosternum weakly tumid, median sulcus between halves ill defined. Metasternum very narrowly hexagonal, its median sulcus rather shallow, fusiform. Ostiolar peritreme scalpeliform, apex acute extending two-thirds of distance across metapleuron. Median portion of first visible abdominal segment slightly tumid, but not umbonate; median rostral furrow obsolete.

Basal (anterior) margin of seventh abdominal sternite in male produced forward into acuminate angle of 30 degrees or less, reaching middle of abdominal disc; median angle of sixth sternite acute, about 60 degrees, corresponding angle of fifth sternite obtuse (120°; fig. 5); apical margin of segment deeply excavated, central portion truncate.

Visible portions of basal plates of female genital valves castaneous,

distinctly wider than long, placed semivertically so that they face partially posteriorly, their surfaces slightly impressed.

Pygofer (figs. 21, 22) globular, lateral apical lobes reduced to small triangular spurs. Details described in section on Special Morphology dealing with types of pygofers.

REMARKS: Apparently related to foregoing genus (*Alveostethus*) because of the narrowly hexagonal metasternum with median, fusiform sulcus, but *Acclivilamna* differs in the contour of the lateral margin of the anterior half of the body.

The generic name *Acclivilamna* was chosen to signify the obliquely placed basal plates of the female genital valves, a character unique in the *Platycarenus* complex.

Acclivilamna vicina (Signoret), new combination

Figures 5, 21, 22, 27

Discocephala vicina SIGNORET, 1851, p. 332. STÅL, 1868, p. 18 (under subgenus *Platycarenus*); 1872, p. 6 (under subgenus *Platycarenus*). LETHIERRY AND SEVERIN, 1893, p. 84.

Discocephala caenosa STÅL, 1860, p. 15.

Platycarenus (*Discocephalessa*) *vicinus:* KIRKALDY, 1909, p. 216.

Platycarenus (*Discocephalessa*) *kormilevi* RUCKES, 1958, p. 4.

DIAGNOSIS: As this species is the only one thus far assigned to the genus, the diagnostic characters are the same as those for the higher taxon.

SPECIFIC CHARACTERS: Broadly ovate, widest across hemelytra opposite base of abdomen; above weakly convex, flat beneath; sordid testaceous, with moderately dense, somewhat irregularly distributed castaneous punctures; pronotal cicatrices and basal scutellar angles with adjacent subcalloused flavescent marks, corium with several impunctate flavescent spots. Beneath flavescent, punctures fuscous, lateral portions of abdomen becoming paler, with ferruginous, finer punctures, median area of disc impunctate.

Head roundly triangular, as long as median length of pronotum, anteocular margins distinctly sinuate, a small obtuse lobule just before each eye, apex narrowly rounded; eyes not sloping over anterior apical angles of pronotum; ocelli very small, in line with posterior margins of eyes; punctures more regularly distributed than elsewhere, about twice as far apart as their own diameters, a few contiguous. Antennae testaceous, basal three segments finely stippled with brown dots, apical portions of terminal two segments infuscated; segmental ratios: 20/40/40/50/55, i.e., segment II twice as long as segment I, equal to III.

Surface of pronotum uneven, punctures on central portion of disc coarser and less dense than those laterally, numerous smooth, irregular, yellow areas evident; anterolateral margins feebly convex-arcuate, their posterior portions narrowly explanate, ending abruptly just before humeri, leaving small obtuse notch there and between humeri and bases of hemelytra. Scutellum less than one-fourth longer than wide at base, punctures somewhat sparingly and irregularly distributed. Hemelytra irregularly, but more densely punctured, numerous irregular, smooth, yellow spots evident, usually a larger discal spot on corium; free apical margin of corium feebly convex-arcuate, external apical angle obtusely rounded; membranes hyaline, pale flavescent, rich tan at bases, with three small dusky spots at the center. Connexivum well exposed, flavescent, ferruginopunctate, segmental sutures feebly infuscated.

Legs flavescent: numerous well-separated brown spots on femora and tibiae, tarsi uniformly pale.

Basal plates of female genital valves castaneous, somewhat impressed, their apical margins truncate, or very feebly sinuate, slightly convergent toward midline.

Pygofer (figs. 21, 22) as described in section on Special Morphology dealing with types of pygofers.

This species averages 8.5 mm. in length; 4.5 mm. in width across humeri; 5.75 mm. in width across widest portion of hemelytra.

TYPE MATERIAL: Holotype, female; Brazil, no date; deposited in the Naturhistorisches Museum, Vienna.

DISTRIBUTION: Brazil: Rio de Janeiro.

REMARKS: This species stands by itself within the *Platycarenus* complex. No other species known to me approaches *vicina* in the form and composition of its pygofer or has the multisinuate contour of the lateral margin of the anterior portion of the body.

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