

DIAGNOSTICS OF THE FAMILIES OF THE AUCHENORRHYNCHA (HOMOPTERA) ON THE BASIS OF THE WINGS. II. HINDWING

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The present work concerns the diagnostic characters of the wings of the Auchenorrhyncha and contains a key for the determination of the families on the basis of the hindwing. A review of the morphology of the wings, notes on the systematics of the suborder, and a list of species studied, as well as a bibliography of works used, are given in the 1st part.¹

KEY TO SUPERFAMILIES

1. Peripheral membrane lacking. A_1 coinciding with vannal furrow, very weak in basal part (sometimes in whole extent) and little resembling a vein (Fig. 3-6), at most fused with Pcu for a short distance (not at base) (Fig. 8-9). Surface of wing between veins without hairs Fulgoroidea.
- Peripheral membrane developed, sometimes lacking around tip of wing. A_1 at base crossing vannal furrow, distally running in line with it (Fig. 14, 19), sometimes reduced basally and becoming branch of Pcu (Fig. 17), or traversing broad vannal furrow in whole length; A_1 always strong, not weaker than Pcu basally, or if fused with the latter it is so at base or in its entire length (Fig. 15, 19) 2.
2. Unstalked apical cells 6-7 (sometimes more). Radial stem ($R_1 + R_s$) not developed or shorter than greatest width of apical cell (Fig. 12). A_1 in most of its length traversing vannal furrow or running close to it. . Cicadoidea.
- Not more than 4 apical cells (rarely as many as 7, and then a few of them stalked [Fig. 18]. Radial stem considerably longer. A_1 in most of its length away from vannal furrow 3.
3. Wing with hairs between veins (at least at apex), sometimes very short, and with chaetoids (at least in anal field). R_s separating from R_1 considerably basal of coupling lobe (Fig. 24); R_s sometimes very weak and M not reaching marginal vein (Fig. 16); marginal vein (extension of C) discontinuing beyond coupling lobe and taking up again as extension of R_1 (Fig. 25). More rarely R_s separating from R_1 before coupling lobe (Fig. 23) or R not branching and wing with strong angular projection on anterior margin (Fig. 15) and peripheral membrane crimped. Cercopoidea.
- Wing lacking hairs between veins, usually with chaetoids. R_s strong, separating from R_1 alongside or immediately before coupling lobe (Fig. 17, 21); marginal vein meeting R_1 beyond coupling lobe (Fig. 26); M ending in marginal vein. R rarely unbranched. Projection not developed on anterior wingmargin, neither strong nor angulate; if peripheral membrane crimped, then anterior wingmargin straight or smoothly curved Cicadelloidea.

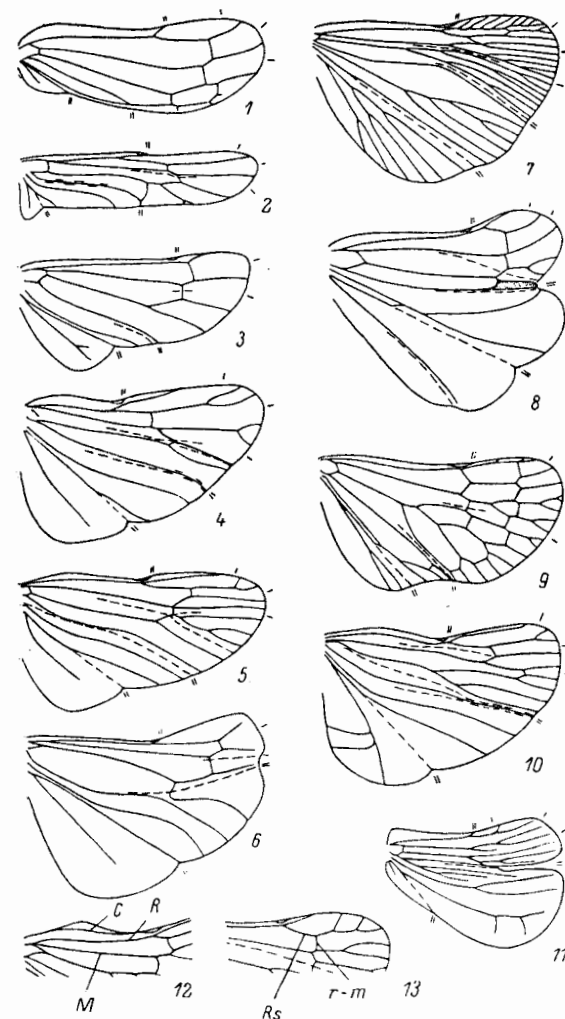


Fig. 1-13. Fulgoroidea, hindwings. 1 - *Latilica* (Issidae); 2 - *Zoraida* (Derbidae); 3 - *Ommatissus* (Tropiduchidae); 4 - *Eponisia* (Meenoplidae); 5 - *Kosalya* (Achilidae); 6 - *Tettigometra* (Tettigometridae); 7 - *Thessitus* (Eurybrachidae, schematic); 8 - Thioniini, gen. indet. (Issidae); 9 - *Biolleyana* (Nogodinidae); 10 - *Flatoides* (Flatidae); 11 - *Prosonoma* (Issidae, schematic); 12 - part of wing of *Euricania* (Ricanidae); 13 - part of wing of *Saigona* (Dictyopharidae). Short double dashes along wingmargin designate nodus and anterior borders of vannus and anal lobe; single dashes indicate limits of R_1 , R_s , M, and CuA regions.

¹Entomol. Obozr. 60 : 828-843 (1981); in Engl., Entomol. Rev. 60 : 64-81.

²Editor's note: This is apparently an error for Fig. 14.

Superfamily FULGOROIDEA

1. Coupling lobe not developed. Claval furrow undeveloped or running into deep sinus in wingmargin (wing bilobate, Fig. 11). Anal lobe very small and often not set off by emargination in wingmargin (Fig. 1, 11) 2.
- Coupling lobe developed. Claval furrow more or less developed, sometimes running into broad sinus in wingmargin (Fig. 8). Anal lobe usually not so reduced 6.
2. Wing bilobate (Fig. 11); anal lobe small and not set off by emargination in wingmargin and other parts of the vannus considerably greater in area than remigium. Wing thick, with numerous branching and transverse veins Issidae (*Prosonoma* et al.).
- Wing not sharply divided into lobes, elongate 3.
3. Transverse veins no more than 4 4.
- Wings covered with numerous transverse veins 5.
4. M and CuA with common basal stem. Transverse vein icua long. CuA₁ with about 4 branches at wingmargin. CuP running to wingmargin. Anal lobe not developed Gengidae (*Gengis*).
- M and CuA not fused at base (Fig. 1). Transverse vein icua lacking, CuA₂ sometimes with appearance of transverse vein. CuA₁ with no more than 2 branches at wingmargin. CuP ending in Pcu. Anal lobe distinct Issidae (part of Issini).
- 5 (3). CuP running to wingmargin, not weaker than CuA or Pcu. Most transverse veins not branched; longitudinal veins even, at wingtip bearing hairs some Eurybrachidae.
- CuP not reaching wingmargin, reduced, sometimes developed only at base and indistinct. Most transverse veins branched or longitudinal veins meandering. Hairs at most on marginal vein . . Issidae (part of Issini, Hemisphaeriinae).
- 6 (1). Vannus with numerous transverse veins 7.
- Vannus at most with occasional transverse veins 8.
7. CuP curved backwards in basal half, in distal half forward and strongly approaching posterior branch of CuA (anterior cubital region in basal 1/3 much narrower than at middle - Fig. 7) or posterior branch of CuA sending a strong transverse vein to CuP. Pcu and A₂ with strong even branches at least at wingmargin. Wing broadest in middle third. Furrows not veinlike Eurybrachidae.
- CuP, if curved, curved otherwise, and/or anterior cubital region not broader in basal 1/3 than in middle. Without transverse veins between posterior branch of CuA and CuP. Pcu and A₂ at most with weakly meandering branchlets, Pcu rarely with strong even branches, and then wing with greatest width in basal third. Longitudinal furrows sometimes in form of weak veins Fulgoridae (in part).
- 8 (6). R not branching, running into anterior wingmargin beyond coupling lobe (Fig. 3). A₁ at wingmargin coinciding with vannal furrow. Pcu at or almost at tip approaching and parallel to A₁. Anterior wingmargin nearly straight. 9.
- R branched, R₁ sometimes rudimentary; Rs running into anterior wingmargin at about midwing. If A₁ in whole length coincides with vannal furrow, then Pcu

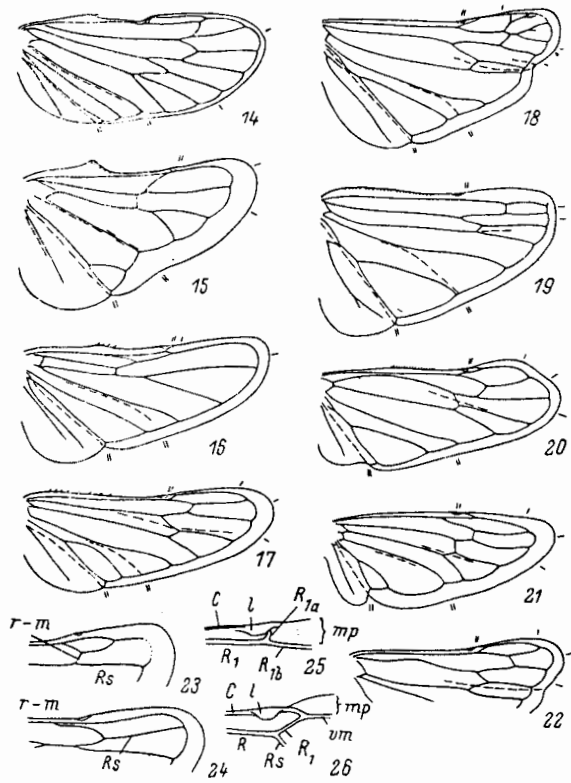


Fig. 14-26. Hindwings of Cicadoidea (14), Cercopioidea (15, 16, 23-25), and Cicadelloidea (17-22, 26). 14 - *Tettigareta* (Tettigarctidae); 15 - *Taihorina* (Machaerotidae); 16 - *Eoscartopsis* (Cercopidae); 17 - *Nacolus* (Hylicidae); 18 - *Eurymela* (Eurymeliidae); 19 - *Cicadella* (Cicadellidae); 20 - *Microcentrus* (Aetalionidae); 21 - *Potnia* (Membracidae); 22-24 - parts of wings: 22 - *Coloborrhis* (Cicadellidae); 23 - *Clastoptera* (Clastopteridae); 24 - *Phymatostetha* (Cercopidae); 25-26 - area of coupling lobe: 25 - *Ptyelus* (Aphrophoridae); 26 - *Balala* (Hylicidae). l - coupling lobe; mp - peripheral membrane; vm - marginal vein; other designations as in Fig. 1-13.

- weakly convergent to A₁ at tip or anterior wingmargin strongly curved . . 1
9. CuA with 2 branches (Fig. 3). Tropicuchidae (in part)
- CuA unbranched Issidae (Caliscelinae)
- 10 (8). Wing less than half as long as forewing, more than 3 times as long as wide; anal lobe small, less than 1/3 length of wing (Fig. 2). CuA₂ branched at base almost perpendicular to CuA, ending in CuP or uniting with it by a transverse vein, or else Rs ending in wingmargin behind wingtip Derbidae (Zoraidini)
- Wing not as small in comparison with forewing nor as narrow, anal lobe large

- If CuA_2 basally nearly perpendicular to CuA , then not united with CuP and CuA_1 unbranched. Rs ending in wingmargin not behind wingtip. 11.
11. With 4 apical cells. 1st section of Rs (from base to nodal r-m) forming angle with radial stem (Fig. 13). M and CuA usually approximated from base and CuA_1 (or CuA) fused for some distance with M (3rd anal cell stalked); more rarely not so, and then nodal r-m not distal of nodal m-cu. . . Delphacidae.
- Apical cells not less than 5, rarely 4 (or 1st of 5 not fully isolated because of reduction of R_1) and then 1st section of Rs extended in direction of R_1 + Rs (Fig. 4), M and CuA not approximated, 3rd apical cell unstalked, and/or nodal r-m coming off M distal of nodal m-cu 12.
12. CuA_2 not appreciably approximated to CuP and not united with it by transverse vein. If tip of R_1 between levels of nodal m-cu and nodal r-m, then CuA_1 branched. 13.
- CuA_2 strongly approximated to CuP or for considerable distance (Fig. 6, 9) and/or united by a transverse vein, sometimes CuA_2 (or CuA_1 or CuA_{2b}) ending in CuP (Fig. 8), or else tip of R_1 between levels of nodal transverse veins and CuA_1 unbranched. Posterior branch of medial furrow not developed 19.
13. Nodal m-cu ending in CuA_1 before its branching, rarely at that point, and posterior branch of medial furrow developed and 1st section of CuA_1 (from base to m-cu) weakened at crossing of posterior branch of furrow and/or not longer than m-cu (Fig. 4, 5). Rarely nodal m-cu ending in CuA_{1a} , then M with 2 branches and nodal r-m not distal of nodal m-cu 14.
- Nodal m-cu ending in CuA_{1a} (as in Fig. 9) and M not 2-branched and/or nodal r-m far distad of nodal m-cu. Rarely nodal m-cu ending in CuA_1 or at its point of branching, and then posterior branch of medial furrow not developed and 1st section of CuA_1 not weakened and longer than m-cu 17.
14. CuA_1 unbranched. Coupling lobe before midwing (Fig. 4). A_1 weakly divergent from vannal furrow (tip of A_1 much closer to tip of furrow than to tip of Pcu Meenoplidae.
- CuA_1 branched and/or coupling lobe beyond midwing. A_1 strongly divergent from vannal furrow (tip of A_1 not closer to tip of furrow than to tip of Pcu). 15.
15. Nodal r-m distad of nodal m-cu (Fig. 5), if basad of point of branching of M then not by much (section of M from nodal r-m to point of branching not more than half as long as M_1). Supplementary row of apical transverse veins sometimes developed Achilidae.
- Nodal m-cu and r-m not more distal than nodal and much basal of point of branching of M (respective section of M not less than $2/3$ as long as M_1); M sometimes unbranched. Supplementary transverse veins lacking 16.
16. With 5 apical cells, only 4th stalked (i.e., CuA branched and M unbranched). Costal region from base to coupling lobe very narrow . . . some Delphacidae.
- Usually with more than 5 apical cells, if 5, then only 3rd stalked (M branched, CuA unbranched). Costal region basally rather broad, tapering to coupling lobe Cixiidae.
- 17 (13). Supplementary transverse veins lacking. Rs extending direction of R, at point of meeting with r-m not bent at angle (as in Fig. 4) and not branched. If CuA_1 unbranched then M also unbranched Derbidae (Derbinae).
- Usually at least 1 supplementary transverse vein present. R_1 extending direction of R; Rs at point of meeting nodal r-m bent at angle, branching farther (Fig. 13). If Rs unbranched, then CuA_1 unbranched and M branched . . 18.
18. If A_1 apically divergent from vannal furrow, then only weakly so (tip of A_1 closer to tip of furrow than to tip of Pcu). Either CuP and Pcu bent forward in distal half and with 1 supplementary transverse vein (im) or nodal transverse veins oblique, many supplementary transverse veins present, and posterior branch of medial furrow developed Fulgoridae (Dorysarthrinae, Dictyopterinae)
- A_1 weakly diverging from vannal furrow (tip of A_1 closer to tip of Pcu). CuP and Pcu almost straight. Nodal transverse veins much more weakly oblique. Supplementary transverse veins 2-4, sometimes lacking. Medial furrow unbranched Dictyopharidae (Dictyopharinae)
- 19 (12). CuA_2 crossing claval furrow at base and almost perpendicular to CuA , turning to wingmargin; at place of bending weakly approximated to CuP , at tip diverging therefrom (Fig. 6). Anterior cubital region in basal third nearly twice as broad as 3 regions anterior thereto together Tettigometridae)
- CuA_2 not crossing claval furrow, directed from base toward wingmargin, at tip not divergent from CuP . Anterior cubital region not so broad 2
20. CuA or CuA_2 ending in CuP . Free part of CuA_2 usually not developed or very short, CuA_2 + CuP strongly thickened and ending in deep emargination in wingmargin. Remigium, anterior part of vannus, and anal lobe forming 3 nearly equal lobes (Fig. 8); if wing shaped otherwise, then CuP in distal part nearly parallel to anterior wingmargin Issidae (Thionini, *Colpoptere*)
- CuA and CuA_2 not ending in CuP , rarely with only CuA_{2b} ending in it. CuP not thickened at tip. Wing not trilobate. CuP at tip diverging from anterior wingmargin, rarely with distal part weakly convergent to it 2
21. CuA_2 united with CuP by transverse vein (veins) and/or anterior wingmargin in basal half with strong projection under which precostal region and strongly broadened costal region are developed (Fig. 12). If CuA_{2b} fused with CuP , then latter not weakened apically and Pcu and A_1 united by transverse vein or fused for some distance 2
- CuA_2 not united with CuP by transverse vein. If anterior wingmargin with weak projection, then precostal region not evident and costal region no more than slightly broader than before coupling lobe (Fig. 10). If CuA_{2b} fused with CuP , then latter in distal half greatly weakened and Pcu and A_1 not joined 2
22. Supplementary transverse veins absent or not forming apical row. Anterior wingmargin without strong projection. Pcu and A_1 joined by transverse vein or fused for a short distance Tropiduchidae (in part)
- Supplementary transverse veins either partly in apical row and/or anterior wingmargin with strong projection and Pcu not joined with A_1 2
23. Anterior wingmargin evenly curved, lacking precostal region. All supplementary transverse veins gathered into apical row, nodal transverse veins often reduced. CuP and Pcu joined near wingmargin by transverse vein. A_2 branched Lophopid)
- Anterior wingmargin with strong projection and below it with precostal region (Fig. 12). If a few supplementary transverse veins developed, they are not in apical row; nodal transverse veins developed. CuP and Pcu not joined by transverse vein. A_2 unbranched Ricaniid)
- 24 (21). Anal lobe, as also anterior part of vannus, very narrow (not broader than medial region). Anterior wingmargin before coupling lobe strongly anteriorly projecting. A_1 before tip running into vannal furrow. Coupling lobe rudimentary Issidae (Tongina)

- Anal lobe and anterior part of vannus broad, if somewhat constricted then anterior wingmargin before coupling lobe almost straight. A_1 up to tip divergent from vannal furrow. Coupling lobe normally developed 25.
- 25. Anterior wingmargin evenly curved or nearly straight (Fig. 9). CuA_{2b} not fused with CuP . R_1 short or with branchlets at wingmargin (if with one, then long and coming off shortly after coupling lobe). Coupling lobe distal of midwing. Nodal transverse veins not strongly oblique 26.
- Anterior wingmargin strongly projecting before coupling lobe, at lobe bent angularly (Fig. 10), or CuA_{2b} fused with CuP . R_1 long, if with branchlet to anterior wingmargin, then very short or far from coupling lobe. Coupling lobe at midlength of wing and/or nodal transverse veins (at least r-m) very oblique 27.
- 26. Wing narrow. CuA_1 unbranched. Pcu apically not approximated to CuP . A_2 unbranched Tropiduchidae (in part).
- Wing broad (Fig. 9). CuA_1 with 3 or more branches. Pcu at tip approximated to CuP . A_2 branched Nogodinidae.
- 27 (25). R_1 not branched at tip. CuA_2 unbranched or with 2 branches. Supplementary transverse veins lacking. Pcu not fused with A_1 . A_2 with weak branches to hindmargin of anal lobe. (Fig. 10). Flatidae.
- R_1 branched at tip. CuA_2 with 3 branches. Supplementary transverse veins 2, in nodal row. Pcu fused with A_1 for short distance. A_2 unbranched Acanaloniidae.

Superfamily CICADOIDEA

- 1. Anterior wingmargin basally with projection bearing single coupling hamule (Fig. 14). Short radial stem ($R_1 + Rs$) developed. A_1 coming off almost midway between Pcu and A_2 , wingmargin at tip of A_1 without emargination. Wing covered with hairs between veins Tettigarctidae.
- Anterior wingmargin without projection or hamule. Rs and R_1 separated to bases. A_1 approximated to Pcu and at distance from A_2 , ending in sinus at wingmargin. Wing without hairs between veins Cicadidae.

Superfamily CERCOPOIDEA

- 1. R unbranched. Pcu and A_1 fused for most of distance from base or in whole extent (Fig. 15). Hairs between veins very short, erect. . . . Machaerotidae.
- R branched. Pcu and A_1 fused at least for very short distance. Hairs between long, decumbent 2.
- 2. Rs separating from R_1 immediately before coupling lobe and again fusing with R_1 well before wingtip, section of Rs before r-m almost straight and only slightly longer than r-m (Fig. 23). CuA not branched. Claval furrow in peripheral membrane very strong. Vannal furrow ending in acute sinus in wingmargin Clastopteridae.
- Rs separating from R_1 well before coupling lobe and again fusing with R_1 near wingtip, section of Rs before r-m bent and/or much longer than r-m (Fig. 24); sometimes weak Rs and M fuse and end in R_1 below coupling lobe (Fig. 16). CuA usually branched. Claval furrow in peripheral membrane at most very weak. Vannal furrow ending in obtuse sinus in wingmargin 3.

- 3. Most of wing between veins covered with hairs; hairs also on bases of Pcu , A_1 and along edge of peripheral membrane. Medial furrow not developed, wingmargin at apex without emargination (Fig. 16, 24). R not branching before level of m-cu, and/or Pcu and A_1 not meeting at base Cercopidae.
- Hairs developed only in vicinity of wingtip, present neither on bases of Pcu and A_1 nor along edge of peripheral membrane. Medial furrow developed, usually strong and crossing weak part of marginal vein to emargination in wingtip (as in Fig. 18). R branched well before level of m-cu. Pcu and A_1 meeting at base and sometimes fused at least at one point, distally diverging Aphrophoridae.

Superfamily CICADELLOIDEA

- 1. R unbranched, beyond coupling lobe running along anterior wingmargin and eventually making transition into marginal vein, not joined by transverse vein to no trace of R_1 (2 apical cells). Section of marginal vein immediately behind tip of CuP reduced Aetalionidae (Aetalioninae, Darthulinae).
- R usually branched, rarely unbranched and then beyond coupling lobe leaving anterior margin of wing and passing into marginal vein, sharply turning downward (Fig. 19), and/or preserving a trace of R_1 ; Rs (or unbranched R) join by transverse vein to or fused with M . If marginal vein has weakened section that is not close to tip of CuP
- 2. Claval furrow developed. CuP apically divergent from furrow and appreciably curved, marginal vein where furrow crosses more or less weakened (Fig. 17-19). Basal part of wing more or less strongly broadened, postcubital region in width and/or length exceeding that of last apical cell. Peripheral membrane not crimped, more rarely broad and crimped and then at least at wingtip very densely covered with chaetoids and coupling hamules strong. M at most weakly approximated to R , rarely strongly and then strong medial furrow ending in sinus at wingtip (Fig. 18, 22)
- Claval furrow hardly developed. CuP nearly straight, marginal vein around tip of CuP without weakened section (Fig. 20, 21). Wing little broadened, sometimes even constricted basally, postcubital region not exceeding last apical cell in size. Peripheral membrane broad and crimped, covered with chaetoids only a little more densely than in apical cells; coupling hamules not developed; and/or M either basally or medially very strongly approximated to R and there with medial region approximately 5 times as wide as radial region (Fig. 20). Medial furrow, if developed, weak and apical margin of wing without emargination
- 3. Coupling hamules few (2-8), strong. Postcubital region up to marginal vein little constricted, approximately twice as long as wide (Fig. 17), base of reduced. 1st apical cell completely closed by marginal vein. Peripheral membrane broad and crimped Hylicidae.
- Coupling hamules lacking or more numerous and weak; postcubital region up to marginal vein not constricted and/or not so long, rarely not so and then base of A_1 developed, 1st apical cell not fully closed (as in Fig. 19), and peripheral membrane narrow and not crimped
- 4. Medial furrow strongly developed, ending in more or less distinct sinus in wingmargin (Fig. 18). Basal half of M rather strongly and uniformly approximated to R (in midwing medial region 2-3 times as broad as radial region). Costal region almost up to coupling lobe uniformly narrow, coupling hamules not developed. Transverse vein m-cu strongly oblique, approximately twice as long as 1st section of CuA (from point of branching of CuA to m-cu). CuA basally weakly turned downward, distally straight. CuP diverging from claval furrow almost at level of base of penultimate (3rd) apical cell and not far

from marginal vein. 1st apical cell closed by marginal vein. Rs sometimes branched Eurymelidae.

-- If medial furrow ending in sinus at wing margin then 1) M more weakly approximated to R, rarely more strongly (then before middle with hump-like bend toward R and medial region there more than 3 times as wide as radial region [Fig. 22]), or costal region basally broadened and distinct coupling hamules present (as in Fig. 19); or 2) transverse vein m-cu almost equal to 1st section of CuA₁ or CuA basally strongly bent downward and then at least weakly bent forward. CuP diverging from claval furrow well before level of base of 3rd apical cell (usually diverging very gradually at first, cf. Fig. 19). 1st apical cell sometimes not closed. Rs unbranched Cicadellidae.

5 (3). M basally or medially very strongly approximated to R for some distance (Fig. 20). Tip of Pcu closer to tip of CuP than to tip of A₁. Peripheral membrane narrow, sometimes weakly crimped, very densely covered with chaetoids passing into cellular microsculpture. Wingtip opposite tip of M Aetalionidae (Biturritiinae, Stylocentrinae).

-- M not strongly approximated to R and/or tip of Pcu closer to tip of A₁ (Fig. 21). Peripheral membrane broad, crimped, covered with chaetoids only a little more densely than in apical cells. Wingtip in vicinity of Rs Membracidae.

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NEW SPECIES OF STAPHYLINIDAE (COLEOPTERA) FROM THE KYZYLKUM DESERT

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During our excavations of burrows of *Rhombomys optimus* Licht. in 1978 and 1979 in the central and southern parts of the Kyzylkum Desert we found 23 species of ridiculous Staphylinidae. Among these were a few species new to science, 2 which are described in the present paper. The types of these species are deposited in the collections of the Institute of Zoology of the Academy of Sciences of the Kazakh SSR in Alma-Ata.

Medon nidicola Kashtsheev, sp. n. (Fig. 1, 6, 7)

Dark brown, abdomen sometimes almost black, elytra yellowish red. Antennae palpi, and legs yellow, with knees of middle legs scarcely darkened. Head and pronotum shining, with coarse and sharp punctation, elytra with denser and smoothed-over punctation. Abdomen matt-shining, with very dense and fine punctation tending to shagreening and covered with dense pale-colored pubescence. Length 4.6 to 4.8 mm.

Head distinctly wider than pronotum, with almost parallel tempora hardly perceptibly narrowing posteriorly. Tempora twice as long as eyes, posterior corners broadly rounded, covered with sparse strong setae directed anteriorly. One bristle each as long as length of eye at hindcorner of tempora and at posterior edge of eye. Two long cruciate setae near lower margin of eye. Clypeus short, broad, projecting over antennal bases as smooth tubercles. Labrum broad, large with 2 long, pointed denticles with shallow angulate incision between them. Furrow between antennal bases forming smooth longitudinal ridge. Gular sutures almost coalescent. Head with coarse sharp punctation, distance between punctures equal to their diameter. Clypeus and anterior part of front smooth, impunctate. Eyes black, head reddish brown, from hindmargin of eyes forward distinctly darker. Antennae long, slender, becoming slightly thicker toward tip; 1st segment hardly shorter than 3 following segments together; 2nd 1/3 length of 1st and noticeably shorter than 3rd. Length of 2 penultimate segments 1.5 times their width; ultimate segment a little broader and longer than penultimate.

Pronotum convex, length to width as 11 : 9, noticeably tapering posteriorly widest at anterior corners. Hindborder and posterior 1/3 of lateral borders with narrow shining margin. Each forecorner of pronotum with 2 long reclinate setae. A few scattered finer reclinate setae around hindcorners. Surface of pronotum with same sharp punctation as head, but much denser; the punctations smaller and spaces between them 1/3 their diameter.

Elytra longer than pronotum and 1.5 times as long as their combined width, parallel, hardly noticeably tapering posteriorly. Flattened but distinct furrow running along sharp, raised elytral suture; their surfaces covered with dense rasplike convex punctations flattened on posterior margins. Elytra yellowish translucent, folded wings easily perceptible through them. Scutellum and adjacent parts of elytra darker. Dorsum with sparse whitish hairs.

Abdomen long, narrow, widening posteriorly, 5th uncovered tergite with long black-brown bristles, twice as long as 4th, 1st to 4th tergites with broad transverse depressions. Abdomen shagreened, dully shining, dark brown to black, with paler transverse grooves; surface with dense pale hairs.