ISSN 0013–8738, Entomological Review, 2007, Vol. 87, No. 3, pp. 287–308. © Pleiades Publishing, Inc., 2007.
Original Russian Text © A.F. Emeljanov, 2007, published in Entomologicheskoe Obozrenie, 2007, Vol. 86, No. 1, pp. 107–131.

New and Little-known Taxa of the Family Cixiidae (Homoptera, Fulgoroidea)

A. F. Emeljanov

Zoological Institute, Russian Academy of Sciences, St. Petersburg, 199034 Russia

Received August 10, 2006

Abstract—Six new genera and eight new species are described from South and Central Americas, South Africa, and Southeastern Asia. Illustrations of the male genitalia of the type species of the genera *Duiliopsis* Bergevin and *Perindus* Emeljanov are given. The generic name *Duiliopsis* is synonymized with *Duilius* Stål. The synonymy of the generic name *Hemitropis* Fieber with *Duilius* is supported.

DOI: 10.1134/S0013873807030062

New genera belonging to various tribes and some interesting new species are described, a description of the male genitalia of the monotypical genus *Perindus* Em., previously known only from a female, is given. The types of the new species, except for those mentioned specially, are deposited in the collection of the Zoological Institute, Russian Academy of Sciences, St. Petersburg (ZIN).

Tribe **OECLEINI**

Genus ***PROCLYTUS*** Emeljanov, gen. n.

Type species *Proclytus guianensis* sp. n.

Description. Body of usual shape, with moderately steep roof-shaped wings similar to those of *Oecleus* Stål. Head (Fig. 1, *3–6*) similar to that of *Pintalia* Stål, medium-sized. Coryphe moderately wide, with lateral margins distinctly converging forwards; anterior carina straight; posterior margin with arcuate or obtuse-angled rounded emargination. Metope in lateral view, including acrometope, in form of convex arc, running to coryphe at obtuse angle, shallowly longitudinally groove-shaped, similar to that of *Pintalia*; lateral carinae high; acrometope pentagonal, without median carina, as well as also coryphe; its anterior margin angularly projecting forwards-downwards, median carina of eumetope beginning from apex of this angle. Border between metope and clypeus straight, depressed; median ocellus large. Eyes rather small, with lower margin slightly concave above antennae. Second antennal segment spherical. Metope widening from coryphe to level of antennae and slightly below, slightly narrowed smoothly toward clypeus, shallowly concave opposite eyes. Clypeus oblong-triangular; lateral carinae of postclypeus sharp, high, becoming lower toward anteclypeus and not extending on it. Rostrum reaching apices of hind coxae, with penultimate segment slightly longer than ultimate one. Length of metope about twice its maximum width.

Pronotum short, distinctly wider than head, with obtuse-angled emargination at posterior margin; lateral carinae of disc absent, median carina well developed. Lateral carinae of pronotum absent, paranotal lobes bearing sharp vertical carina nearly reaching posterior margin of pronotum at border of paranotal lobes with paradiscal area. Posteroventral angle of paranotum angular. Mesoscutum large, with 3 carinae; lateral carinae slightly diverging backwards; lateral lobes rather strongly inclined.

Fore wing (Fig. 1, *1*) slender, moderately roof-like in response, similar to those of *Oecleus*; corium slightly widened toward membrane; membrane parabolically rounded. Costal carina convex at base, then straight. Basal cell rather wide; arc rather long, *ScR* and *M* running from basal cell from one point; first branching of *ScR* situated in distal 1/3 or 1/4 of corium. Pterostigma rather small, oblong-triangular; its anterior half corrugated; posterior one not corrugated, covered with granules; behind pterostigma, vein RA_2 forming obtuse-angled break turned backwards. First branching of median vein lying on nodal line; and first bend of *MP* strongly turned backwards, simulating cross-vein. First branching of *CuA* strongly shifted distally, situated slightly basal to apex of clavus. Short and weak intercubital cross-vein resting against apex of clavus. Granules on veins nearly invisible.

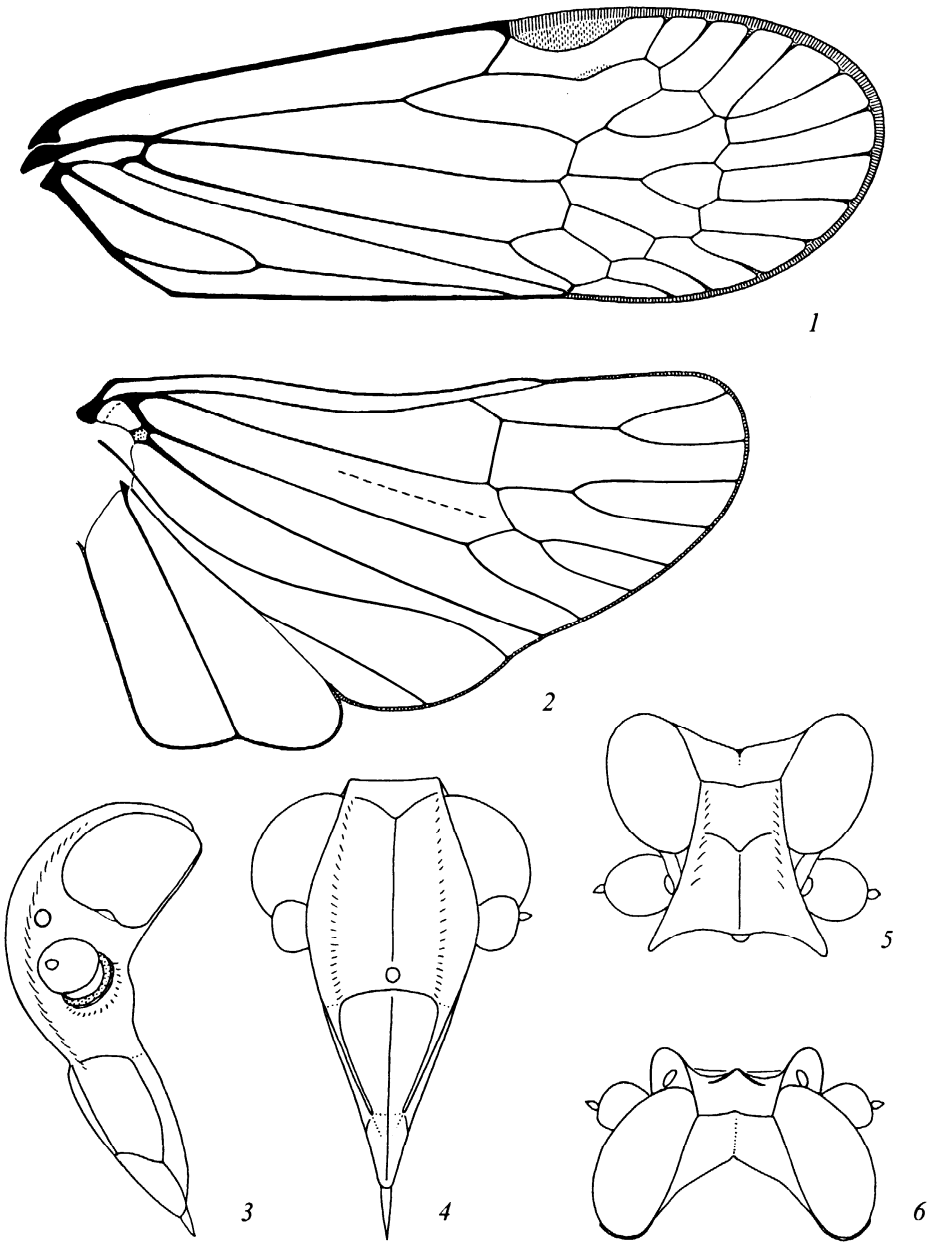

Fig. 1. *Proclytus guianensis* gen. et. sp. n.: (*1, 2*) wings [(*1*) fore, (*2*) hind); (*3–6*) head [(*3*) lateral view, (*4*) anteroventral view, (*5*) anterodorsal view, (*6*) dorsal view].

Legs rather short, hind tibia without lateral teeth and with 6 apical teeth separated by interval. Apices of 1st and 2nd segments of hind tarsus with 8 teeth each; teeth on 1st segment without, and on 2nd segment with subapical setae. Ovipositor well developed; wax area small, oval, inclined.

Male genitalia (Fig. 2). Pygopher slightly compressed, with lower wall much longer than upper one; lateral margins with 2 gently sloping convexities separated by gently sloping concavity; lower process rather large, with rounded apex. Anal tube with angular lateral lobes. Styli small, their apices deflexed upwards, in form of rounded rectangles; median margins serrate. Basal segment of penis (theca) with smooth dorsal wall, its apex bearing at left long and fine recurrent process; apical half of ventral surface bearing strong longitudinal comb forming ventrobasally large process; other large process running basally from middle part of right wall of theca curved downwards and then basally again. Ventrobasal part of theca widened.

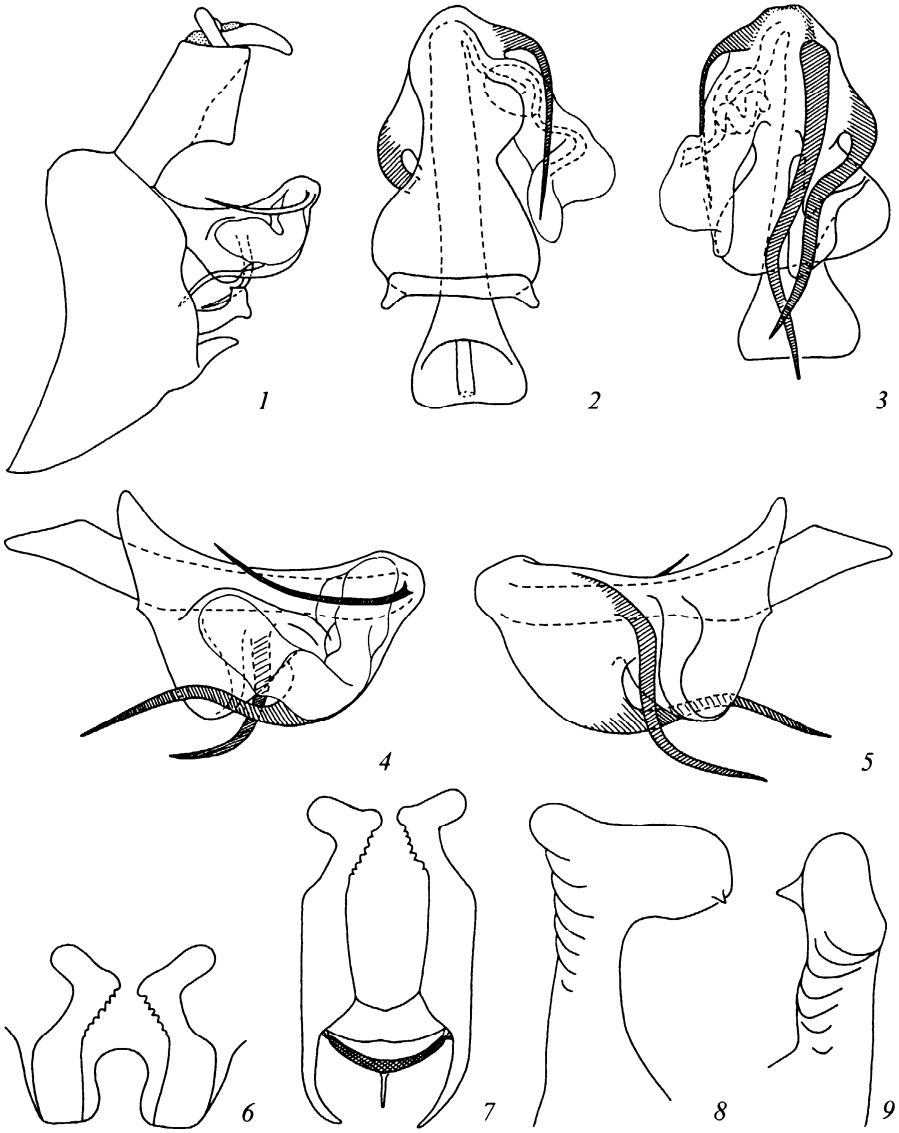

Fig. 2. *Proclytus guianensis* gen. et. sp. n.: (*1*) male genital, view from the left; (*2–5*) penis [(*2*) dorsal view, (*3*) ventral view, (*4*) view from the left, (*5*) view from the right]; (*6–9*) styli [(*6*) ventral view, junction with pygopher; (*7*) ventral view, separated; (*8*) apex of left stylus, dorsal view; (*9*) apex, medial view].

The new genus belongs to the tribe Oecleini and is similar to the genus *Oecleus*, being a less specialized morphotype. Inclusion of the new genus in this tribe is based on the following characters: frontoclypeal border straight, median ocellus developed, metope diamond-shaped, and hind tibia without lateral teeth and with diastema of apical row of teeth. The new genus is similar to the genus *Oecleus* in the fore-wing venation with the fork *CuA* strongly shifted toward the apex of the clavus. The new genus is also characterized by the sharp anterior border of the coryphe in combination with the less sharp anterior border of the acrometope and with the coryphe and acrometope articulated at a distinct obtuse angle, similarly to those of *Oecleus.* The structure of the male genitalia is also typical of representatives of the tribe Oecleini: the apical parts of the styli are smaller and the anal tube forms lateral prominences near the middle.

Proclytus guianensis Emeljanov, sp. n. (Fig. 1, 2)

Description. Body brownish. Posterior part of coryphe and lateral surfaces of head paler. Rostrum pale brownish, with blackened apex. Pronotum also paler entirely or on upper side. Vague brownish darkening quite frequently remained on upper side at posterior margin. Mesoscutum brownish. Carinae not

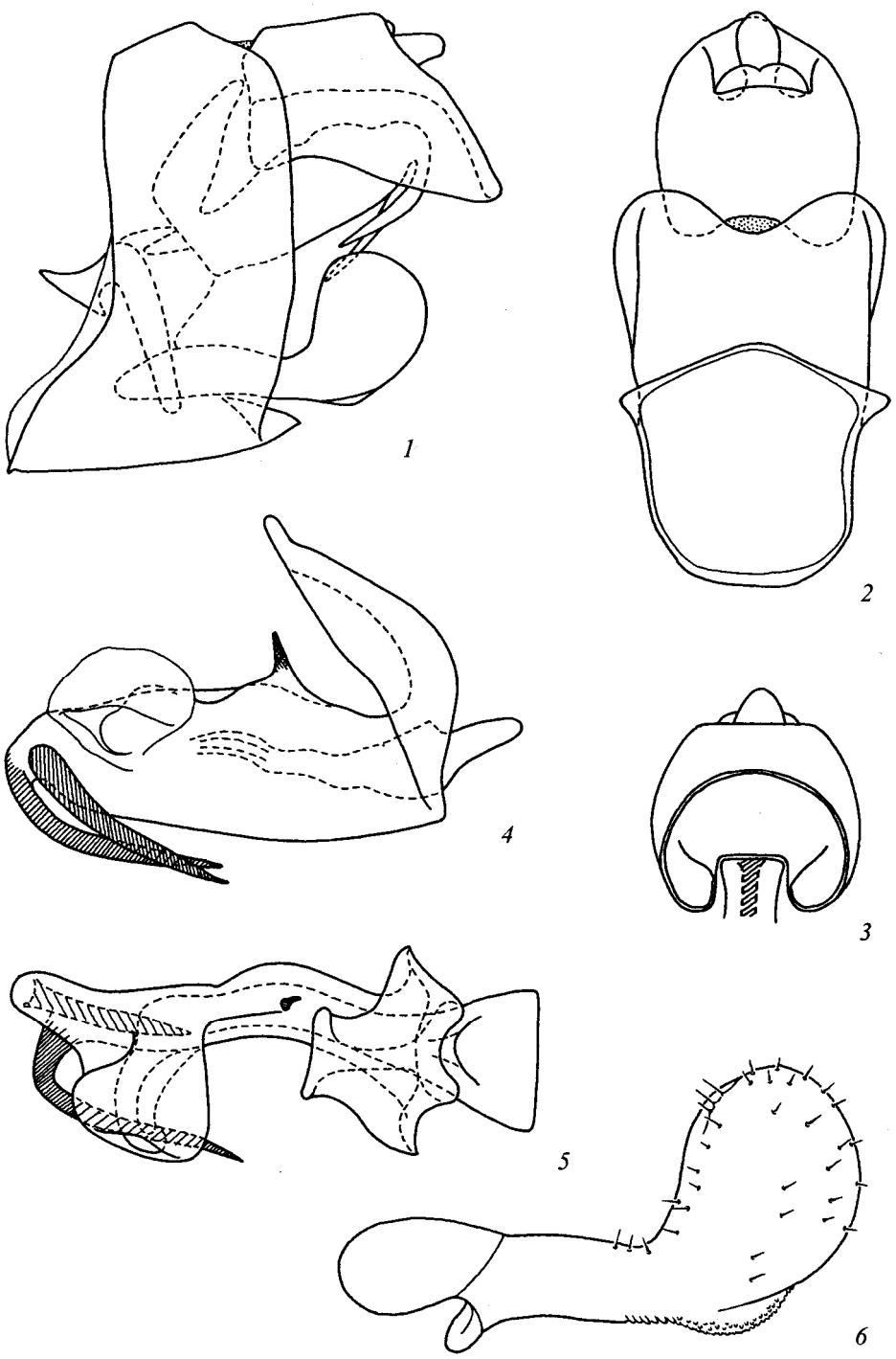

Fig. 3. *Perindus binundatus* Em.: (*1, 2*) male genitalia [(*1*) view from the left, (*2*) dorsal view]; (*3*) anal tube and base of suspensorium of theca, front view; (*4, 5*) penis [(*4*) view from the right, (*5*) dorsal view]; (*6*) left stylus, ventral view from the left.

distinguished by coloration, but vague weakly darkened paler stripes running at sides of lateral carinae. Fore wing hyaline, with brownish veins and pterostigma; clavus with vague narrow longitudinal spots near middle of posterior margin and at apex. Thorax on lower side and abdomen brownish to pale brownish, with margins of sclerites usually paler. Fore and middle femora brownish, with paler bases and apices; tibiae with 2 vague dark bands: subbasal and subapical; tarsi dark; hind femur brownish; tibia

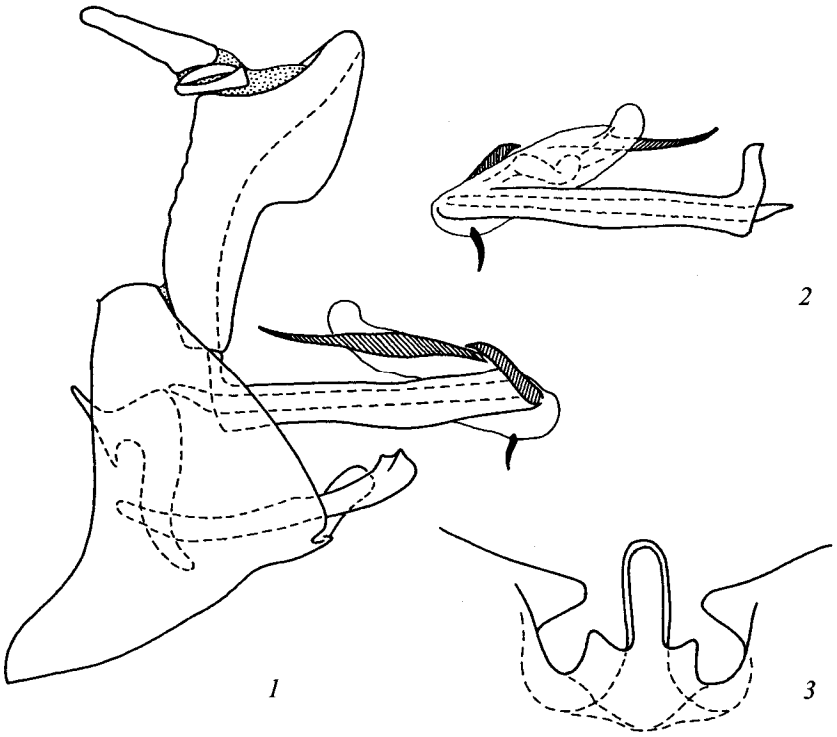

Fig. 4. *Oecleus kasparyani* sp. n.: (*1*) male genitalia, view from the left; (*2*) penis, view from the right; (*3*) medioventral process of pygopher, ventral view.

mainly pale brown, slightly darkened before base; tarsus pale.

Length of body 5.5–6.2 mm in male, 6.2–6.7 mm in female.

Material. Holotype: ♂, Guyane Fr., Mt. De Kaw, 2 km SO of Camp Caïmans, 300 m (4°34′ N, 52°12′ W), 25.VI.1995 (V. Gusarov). Paratypes: same locality, 25.VI and 9–10.VII.1995, 3 ♂, 6 ♀; 22 km NW Regina, pk 79 Route Nle 2, 100 m, (4°25′ N, 52°19′ W), 28.VI.1995, 1 ♂ (V. Gusarov).

GENUS ***PERINDUS*** EM.

Perindus binundatus Em. (Fig. 3)

The below description of the male genitalia was made from males collected in Oman ("Jimah, glass house") and sent me by M. Webb for identification.

Description. Pygopher compressed, upper wall rather long, posterolateral margins nearly straight, caudoventral process simple, oblong-oval. Anal tube widely oval in cross-section, with wide base, mitriform; its anterior basal wall with deep emargination, to ventral part of which suspensorium of phallotheca attached. Styli simple, with rounded apical part, similar to those of species of the genus *Cixius* Latr.; caudoventral angle tuberculate. Penis rather simple; phallotheca high, compressed. Suspensorium large, its posterior wall concave, apex bent caudally; suspensorium strengthened by furcate (inner) sclerotized chord beginning at sides of basal aperture of theca as 2 branches merging dorsally into one branch forming at apex mentioned junction with anal tube. Apex of theca with 2 unequal recurrent processes: right process extending sideways and then bent forwards; dorsal wall with tooth in middle part. Short and thick distal segment situated dorsally subapically and directed transversely to the right.

Structure of styli and suspensorium of phallotheca most distinctive.

Length of body 4.5 mm in male, 5.2 mm in female.

Genus ***OECLEUS*** Stål

Oecleus kasparyani Emeljanov, sp. n. (Fig. 4)

Description. About 1/4 of macrocoryphe projecting in front of eyes; eumetope and macrocoryphe in lateral view forming obtuse angle in males, and nearly right angle in females. Pronotum rather wide; upper end of humeral carina of pronotum extending under margin

of head in angle between gena and lower margin of eye; postocular carina not connected below with humeral carina and not continuing it (in contrast to case, when upper part of humeral carina not expressed, and lower end of postocular carina merging with humeral carina); posterodiscal carinae distinct, slightly approximating backwards. Mesoscutum with intermediate carinae nearly not distinguished by relief, but distinguished by coloration. Fore wing with strongly widened costal margin in anterior part.

Head pale, dirty brownish; eumetope between carinae entirely or partly blackened, paler area lying between antennae and eyes. Postclypeus pale, reddish brown; anteclypeus blackened. Pronotum whitish pale brown. Mesoscutum reddish brown, intervals between carinae on disc occasionally weakly, but usually strongly darkened. Fore wing entirely or mainly with hyaline cells and whitish veins bearing dark granules. In males, pattern absent, cells slightly brownish. In females, cells pale, but dark brownish areas usually present on corium and clavus in parts adjoining scutellum, band extending from pterostigma to apex of clavus also dark brownish, and cross-veins distal to band and apices of all veins also darkened. On corium, basal dark area occupying basal cell and adjoining parts, including corresponding part of costal widening. On legs, fore coxa and middle parts of all femora with vague dark areas. Sclerites of meso- and metathorax and abdominal sternites also almost entirely or partly darkened. In males, only fore leg darkened, or darkening absent.

Male genitalia (Fig. 4) typical of the genus. Pygopher with smoothly convex lateral posterior margin, medioventral process with 1 pair of tapered lateral teeth in middle part. Anal tube with rounded lateral lobes in distal half of lower margin. Styli of usual shape, with small capitulum bearing 1 median comb and 1 short subconical laterodorsal prominence. Penis. Base of theca slightly bend with prominence directed to the left, prominence formed by gently sloping longitudinal carina. Apex of theca bearing at left 2 small processes: lower one shorter and straight, directed ventrobasally, upper one longer, S-curved, deflexed dorsomedially. Distal segment about half as long as theca, with long pointed subapical process nearly touching base of theca. Within distal segment, dark sclerotized inner capsule, characteristic of representatives of the tribe Oecleini, well visible. The new species similar to *Oecleus snowi* Ball. in the structure of the genitalia

Length of body 6.7 mm in male, 7.8–8.1 mm in female.

Material. Holotype: ♂, Mexico, Nueva Leon, 28 km W of Linnares, 6.VII.2000 (Kasparyan). Paratypes: 1 ♂, 3 ♀, as holotype.

Comparison. The new species is rather similar to *Oe. snowi* Ball. in the structure of the male genitalia, but differs in the presence of the ventral process at the apex of the theca [right process, according to Kramer's (1977) terminology], in the S-curved dorsal (left) process, and in the lateral teeth of the medioventral process of the pygopher, which are situated not at the base, but near the middle.

Genus ***NYMPHOMYNDUS*** Emeljanov, gen. n.

Type species *Nymphocixia caribbea* Fennah, 1971.

The characters listed by Fennah (1971) for distinguishing *N. caribbea* Fennah and the type species of the genus *Nymphocixia* V.D. clearly show that *N. caribbea* should be attributed to a new genus: "Vertex longer in middle than broad at base (2 : l), lateral margins converging distad, median carina absent; frons in profile with margin almost straight in its distal three–quarters." The new genus occupies an intermediate position between the genera *Nesomyndus* Jacobi from Madagascar and *Nymphocixia* V.D., in which the species described by Fennah was included. *Nesomyndus* Synave possesses no median carina of the coryphe, similarly to *Nymphomyndus,* but the posterior margin of the coryphe ("vertex") not entirely overlaps the pronotal disc, in contrast to that of *Nymphocyxia* and *Nymphomundus* gen. n. The fore-wing venation is similar in all the three genera, with the characteristic anastomosis of the vein CuA_1 and CuA_2 distal to the apex of the clavus.

Tribe **CIXIINI**

Genus ***TAOMMA*** Emeljanov, gen. n.

Type species *T. rasnitsyni* Emeljanov, sp. n.

Description. In habitus, it similar to the genus *Andes* Stål, but clearly differing in wide capitulum and well-developed stalk of *ScR.* Coryphe slightly wider than long; acrometope sharply separated, transverse, with distinct anterior and posterior carinae, moderately inclined forwards and situated at angle relative to

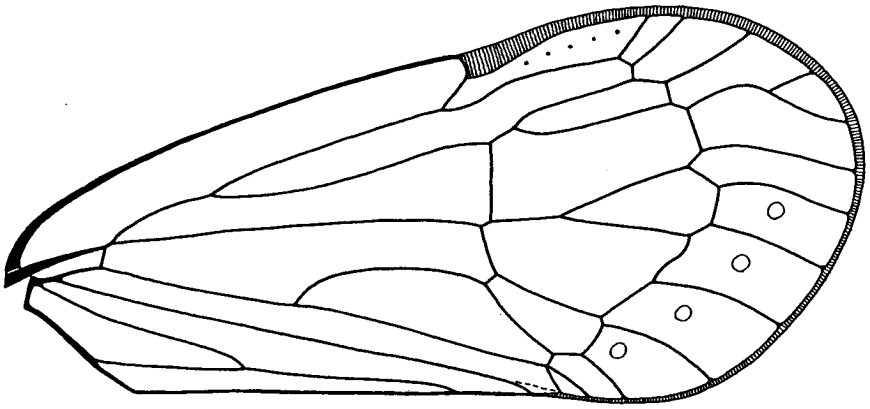

Fig. 5. *Taomma rasnitsyni* gen. et sp. n., fore wing.

coryphe and to eumetope. Median carina of acrometope and coryphe absent; anterior margin of acrometope gently obtuse-angled, posterior margin gently arcuate; coryphe widened backwards, concave-depressed; its lateral margins elevated, posterior margin low, gently arcuate or roundly obtuse-angled, nearly straight. Eumetope rather wide, with sharp longitudinal carinae, lateral carinae leaf-like in lower half, directed sideways and slightly forwards, arcuately projecting sideways, partly covering antennae, weakly curved between eyes, approximately parallel above eyes. Intervals between carinae gently groove-shaped. As whole, shape of head similar to that of species of the genus *Achaemenes* Stål. Clypeal margin of metope moderately concave. In lateral view, eumetope and clypeus forming very gently sloping arc. Median ocellus well developed. Clypeal carinae sharp; lateral carinae of postclypeus gradually becoming lower from metope, extending onto anteclypeus, and wedge-shaped connected near its middle. Rostrum reaching apex of hind coxa, its ultimate segment slightly shorter than penultimate one. Lateral ocelli large. Antennae of medium-sized, with approximately spherical second segment.

Pronotum short, its posterior margin with deep angular emargination in middle basal part. Disc narrower than coryphe, bearing well-developed median carina with depressed lateral areas at sides. Lateral carinae of disc smoothly turning into postocular carinae and then, into pectoral carinae developed only in upper part of paranotal lobes; lateral carinae absent; postocular carinae merged with posterior margin (carina) of pronotum slightly behind eyes. Mesoscutum diamond-shaped, with sharp carinae; lateral carinae slightly diverging backwards; lateral lobes rather strongly inclined downwards. Tegula with well-developed longitudinal carina.

Fore wing (Fig. 5) rather steeply roof-like in repose, rather strongly widened up to stigma and middle part of posterior margin of membrane; membrane oblique toward posterior margin, its anterior part curved more sharply; apex of wing lying between branches *RP* and *MA*. Costal margin convex at base, then very slight convex, in addition, also convexly bending relative to plane of wing, this bend releasing place for motion of hind knee joints during jump. Longitudinal veins covered with fine fragile setae bearing no granules at bases. Veins *ScR* and *M* extending from basal cell alongside but separately; *ScR* branching near middle of corium, *M*, at nodal level. Extravenal pterostigma narrow, cuneiform; stigmal cell narrowed distal to nodus, covered with setae over entire surface; *RP* bifurcating opposite anterior 1/3 of stigma, then each branch or only posterior branch bifurcating again subapically; anterior branches running obliquely and in parallel to distal margin of pterostigma, approximating at angle with posterior branch; fork of posterior branch typically deflexed backwards. *MA* three-pointed in posterior comb; at nodal level, *MP* transversely sharply turned backwards from its base, simulating cross-vein; true nodal cross-vein *mcu* very short, approaching to *M* in place where it turning (again) distally. *CuA* fork lying distal to *ScR* fork and recurrent claval fork. Area cua_1 sharply narrowed distal to nodal line, oblique postclaval vein shifted from apex of clavus. Recurrent fork on clavus lying more closely to its base than to apex.

Legs of medium proportions; hind tibia with 2 or 3 lateral teeth and 6 apical teeth. Basal segment of hind tarsus long, bearing 8 apical teeth without subapical

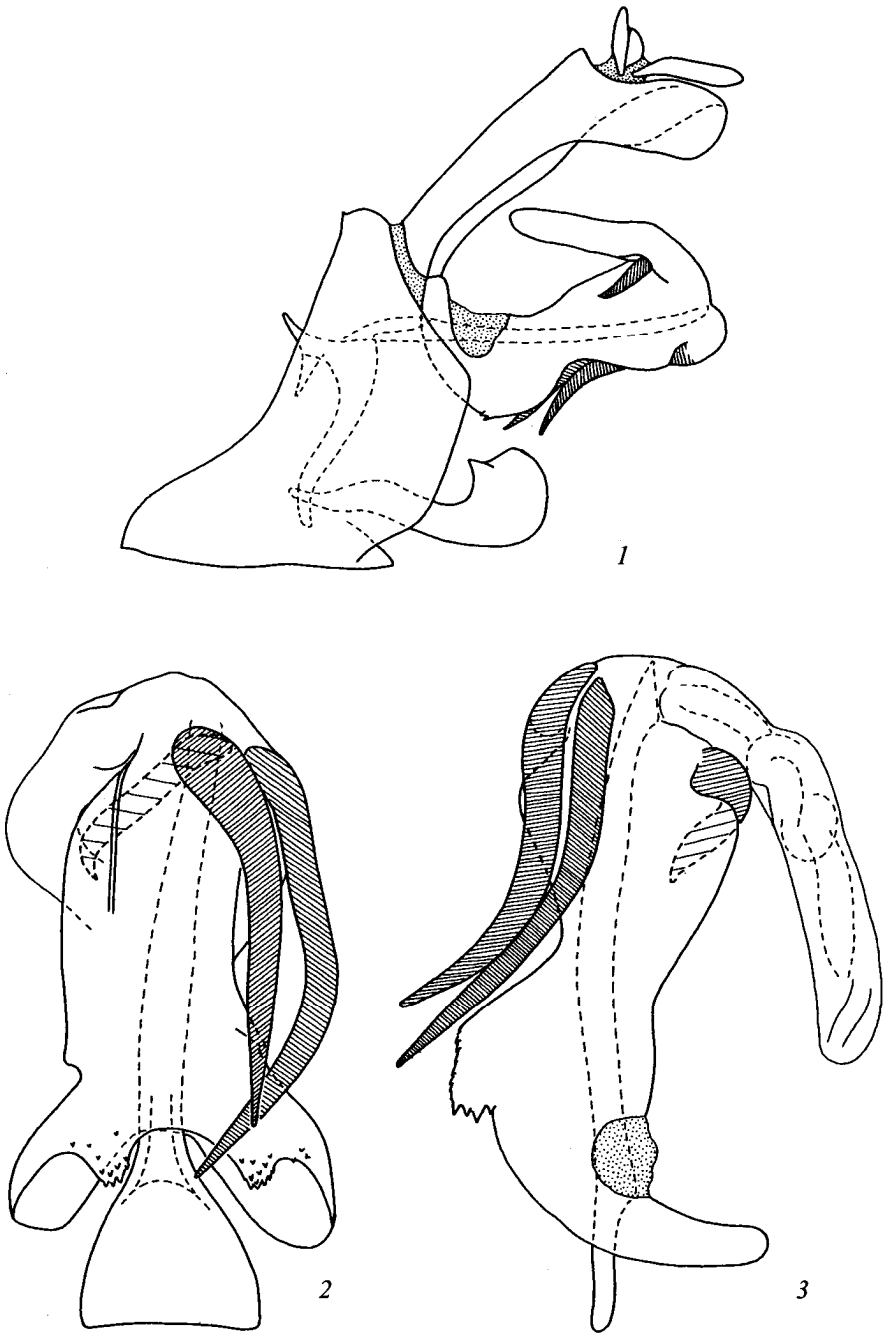

Fig. 6. *Taomma rasnitsyni* gen. et sp. n.: (*1*) male genitalia, view from the left; (*2, 3*) penis [(*2*) ventral view, (*3*) view from the right].

setae; 2nd segment of hind tarsus with 8 teeth, each tooth, except for marginal ones, bearing subapical setae. Ovipositor well developed, pygopher with longitudinally oval, concave, not edged wax area.

Apparently, the genus is closely related to the genus *Achaemenes* and most clearly differs from the latter in the short wings widened toward the apices, character of the vein bend, and structure of the pterostigma, which is oblong and not put toward the posterior margin of the wing.

Taomma rasnitsyni Emeljanov, sp. n. (Fig. 5, 6)

Description. Body mainly reddish brownish. Upper part of head, except for genae, whitish or nearly white; ridges of carinae blackened. Coryphe (as well as acrometope) occasionally with 2 longitudinal brownish stripes. Eumetope with 2 black stripes at sides of median carina; these stripes usually extending onto postclypeus, frequently being there paler (dark brownish or brownish). Median carina of metope not blackened along ridge, median carina of clypeus with black line

along ridge. Genae below antennae with rather dense white wax coating. Posterior part of paranotum and adjacent part of upper side of pronotum whitish. Mesonotum slightly more intensely reddish than other parts of body; lateral carinae of mesoscutum widely entirely blackened, median carina with 2 narrower black or dark brownish stripes at sides. Fore wing reddish brownish, hyaline, with whitish spots and bands; pale elements of pattern edged with brownish to dark brownish areas. Pale elements: first claval area (posterocubital), except for apical part; oblique triangular spot extending from stalk of *ScR* to *MI* fork, one margin of this spot parallel to suture of clavus; transverse band beginning from costal margin slightly more basally than stigma and running to posterior margin of wing through apex of clavus; indistinct pale spot in costal area between oblique spot and band; on membrane, 3 approximate spots in subapical cells *rm, m*, and m_2 separated by dark veins, 4 apical median cells (2nd–5th) entirely blackened, each with round sharp white spots in middle; also membrane bearing indistinct pale spot distal to stigmal cell and in distal part of apical cell *rm* behind characteristic oblique posterior branch *RP*. Cross-veins of nodal row whitish; cross-veins of subapical row also whitish together with small adjacent areas of longitudinal veins. Lower surface of body reddish brownish; legs nearly brownish; female pygopher brownish, darker than other parts of abdomen; ovipositor strongly blackened.

Male genitalia (Fig. 6). Pygopher of medium proportions; its posterolateral margins obtuse-angularly projecting, tip of angle rounded. Posteroventral process short, in form of obtuse wedge. Anal tube moderately elongate, parallel-sided, with asymmetrical lobiform apical prominence directed posteroventrally. Left wall of prominence wider. Penis of cixioid type. Dorsal wall of theca with membranous lacuna distal to suspensorium; base of theca wide, ventrally with teeth at sides and emarginate in middle part. Theca ventrally at left in distal half with lobiform ridge, dorsally with longer ridge higher in distal half; dorsally at apex theca bearing arcuate process beginning on right side and obliquely transversely bent to left side. Ventrally theca bearing 2 long recurrent processes extending from the right of apex of theca and nearly reaching base of theca. Distal segment of penis long, arcuate, without teeth and processes. Stylus with flat rounded widening at apex deflexed dorsally, anterodorsal margin attenuate in form of short bill.

Length of body 6.3–6.4 in male, 6.8–7.6 mm in female.

Material. S. Africa: Holotype: ♂, W Cape, N 4, Robinson Pass, 3322Cc, 35 km N Mosscl Bay, 12.I.1983, mountain spring, R. Miller and P. Stabbins (Natal Mus.). Paratypes: 1 ♂, 4 ♀, same data (Natal Mus.); 1 ♂, W. Cape, N 38, Kirstenbosch Gardens, 33°59′ S, 18°26′ E, 300 m, 7.XII.1993 (P.E. Reavell), Fynbos and Eragrostis (Natal Mus.).

In a popular illustrated key to insects of the Republic of South Africa (Van Stalle, 1984b) this species was erroneously cited and figured as *Brixia speciosa* Muir. The genuine *B. speciosa* possesses seven eye-like spots in the posterodiscal part of the membrane, in contrast to the five spots shown in Van Stalle's figure of the wing; this species does not occur in the Republic of South Africa (it is known from Nigeria, Togo, and Malawi).

Genus ***CARAVELLA*** Emeljanov, gen. n.

Type species *Caravella saccibuccis* sp. n.

Description. Body moderately narrowed, head not wide. Fore wing smoothly sloping roof-like folded. Structure of head rather distinctive (Fig. 7). Upper part of head narrowed, clypeus rather wide and convex. Coryphe moderately elongate, narrowed forwards, narrow in anterior part, with acute-angularly projecting anterior margin; apex resting against transverse obtuse-angularly curved anterior margin of acrometope divided in that way into 1 pair of triangular cells. Posterior margin of coryphe with deep parabolic emargination extending approximately up to level of middle of eyes; surface of coryphe concave, groove-shaped; its lateral carinae leaf-like projecting, arcuately rounded in lateral view, forming common arc with less strongly curved lateral margins of metope. Eumetope narrow in upper part, strongly widened as far as lower margins of antennae, moderately narrowed to clypeus in lower part. Two parabolically rounded prominences of clypeus deeply jutting out into metope lateral to median carina of metope; median part of metope with median carina angularly running into clypeus; median ocellus absent. Border of clypeus and metope forming no suture, visible only as change of sculpture of surface. Prominences of clypeus running into metope as far as level of longitudinal axes of antennae; middle prominence of metope projecting as far as level of lower margins of antennae (pedicels). Lateral margins of metope slightly concave between eyes. Lateral and median carinae of eumetope high, ctenoid, separated by groove-shaped intervals. Postclypeus wide, convex; its median carina sharp, but

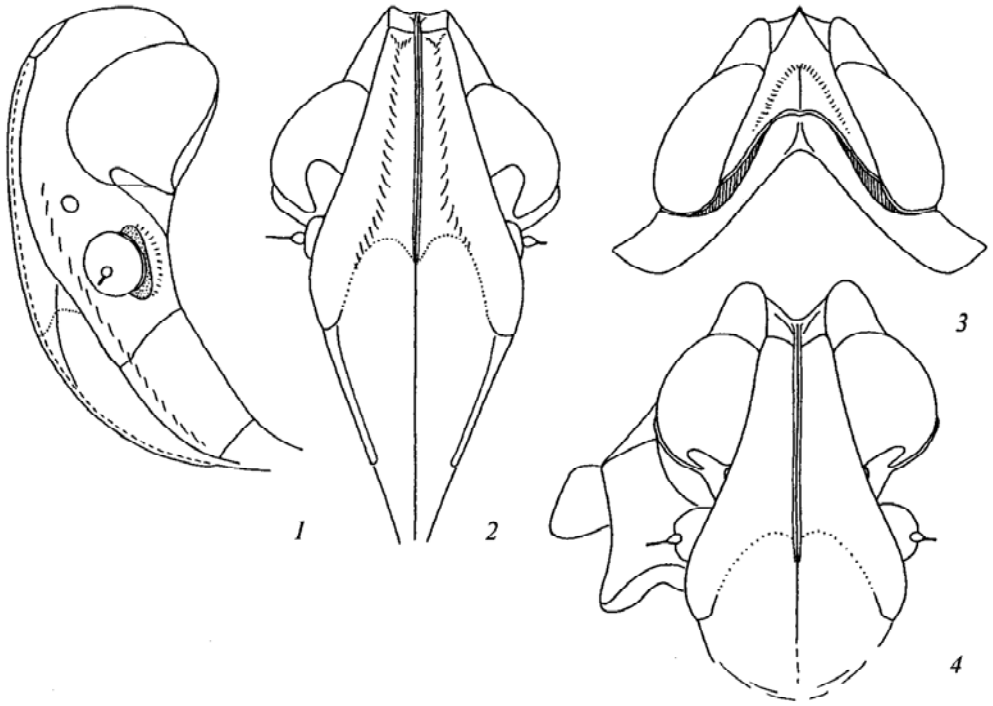

Fig. 7. *Caravella saccibuccis* sp. n.: (*1*) head, lateral view; (*2*) face; (*3*) head and pronotum, dorsal view; (*4*) head and right half of pronotum, front view.

lower than that on metope. Lateral ocelli medium-sized, closed to eyes. Eyes medium-sized, slightly longer than high; emargination of lower margin below antennae well visible. Supraocular and preocular areas rather wide; keel-shaped horizontal carina running approximately across ocellus from eye to margin of metope, this carina bounding along upper margin gentle antennal depression. Gena below eye with fine groove beginning from margin of eye in anterior part and running obliquely backwards and downwards. Lateral margins of metope below eyes and lateral margins of postclypeus keel-shaped projecting sideways, genae around antennae, together with lora, depressed toward saggital plane. Rostrum rather long, projecting backwards beyond apices of hind coxae; penultimate segment slightly longer than ultimate one. Antenna small, pedicel nearly spherical.

Pronotum short in dorsal view, its posterior margin acute-angularly concave, subparallel to anterior margin, except for narrow discal area trapeziform rounded in anterior part. Anterodiscal carinae continuously turning into postocular carinae running onto paranota and deflexed medially to their anterior margins opposite antennal bases; lateral carinae distinct. Paranotum with attenuate ventrocaudal angle, lower margin of paranotum turned outwards as narrow stripe and deflexed upwards. Mesoscutum large, with 3 distinct carinae; lateral carinae sharper, diverging backwards; paradiscal areas of mesoscutum rather sharply inclined sideways. Tegula with longitudinal carina.

Fore wing (Fig. 8, *1*) medium-sized; anterior margin of wing gently convex, maximum width near middle of its length; margin of membrane non-uniformly rounded, most steeply curved in posteroapical sector; posterior margin of membrane continuing line of posterior margin of clavus. Veins moderately carinate projecting, bearing small granules. Basal cell rather wide, stems of *ScR* and *M* beginning from one point in basal cell. Apical vein RA_2 recurrent deflexed; therefore, stigmal cell in form of irregular trapezium with short anterior base; thickening of pterostigma occupying anterior part of cell, margin of thickening indistinct. First branching of *R* lying before middle of corium, slightly more closely to base than first branching of *CuA*. *M* branching at nodal level, *MA* three-pointed, *MP* two-pointed, nodal veins *rm* and *mcu* lying before fork. Fork *CuA* and recurrent fork of clavus lying at one level. Postclaval vein *icu* situated at distance from obtused apex of clavus, but reaching margin in place of resting of claval suture.

Hind wing (Fig. 8, *2*). Anterior margin nearly straight, coupling lobe situated distal to its middle. Branch $ScRA_1$ rather long, slightly sinuous. *RP* two-

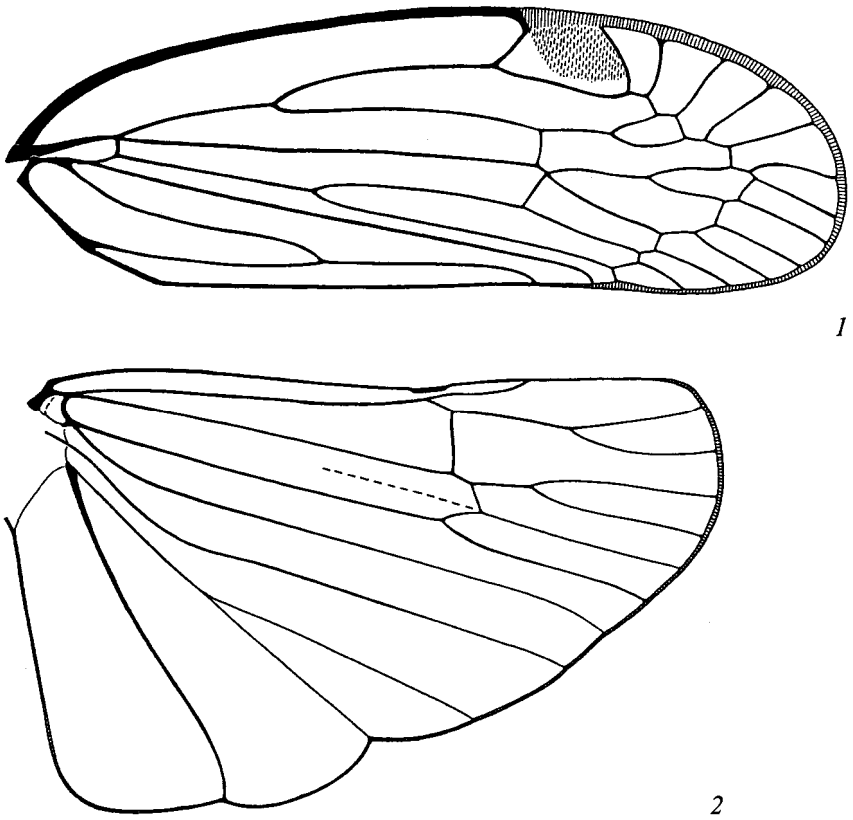

Fig. 8. *Caravella saccibuccis* sp. n., wings: (*1*) fore, (*2*) hind.

pointed, with both branches resting against terminal margin. Vein *rm* long, obliquely transverse; posterior end lying distal to anterior one. Bases of *ScR* and *M* originating from one point of basal cell. *MA* two-pointed. Vein *MP* + *CuA* not branching. Vein A_2 gently S-curved, margin of wing slightly obtuse-angularly concave opposite apex of this vein.

Legs of medium proportions, hind tibia with 2 small lateral teeth and very weak knee tooth (third tooth). Apex of tibia with 6 teeth, among which 3 median teeth becoming slightly longer toward middle line. First segment of hind tarsus with 7 or 8 apical teeth bearing no subapical setae; 2nd segment also with 7 or 8 apical teeth, but these teeth bearing subapical setae, except for marginal ones.

Male genitalia (Fig. 9). In general plan, it similar to that of species of the genus *Cixius* Latr. Pygopher with roundly projecting posterolateral lobes and with obtuse-angled, weakly projecting ventrocaudal process. Anal tube moderately elongate, sides with slightly convex near base; tube slightly narrowed there, bearing ventrally at apex lateral lobes united at base by posterior margin of tube deflexed downwards; bases of lobes shifted medially relative to lateral margins of tube. Stylus of same type, as that of species of the genus *Cixius,* with flat rounded apex shifted dorsally in relation to base. Basal segment of penis with 1 pair of short teeth on lower side of base and with 4 subapical processes: 1 pair dorsal, situated at sides of distal segment, with apices directed toward base; two other processes ventral, situated on right side, with approximate bases, process lying more laterally directed toward base, other directed to left across body of segment, being squeezed into gap between body of segment and preceding process. On upper side at left, body of segment bearing high lobiform carina. Distal segment arcuate, with long, sclerotized process running transversely at apex.

Female unknown.

Diagnosis. The new genus is closely related to the genus *Cixius*, but clearly differs from it in the shape of the head with the narrow coryphe having the pointed anterior margin, in the carinate tegula, and in the absence of median ocellus. In the latter character, the new genus is similar to the Australian-New Zealand genus *Chidaea* Em. (which also has no median ocel-

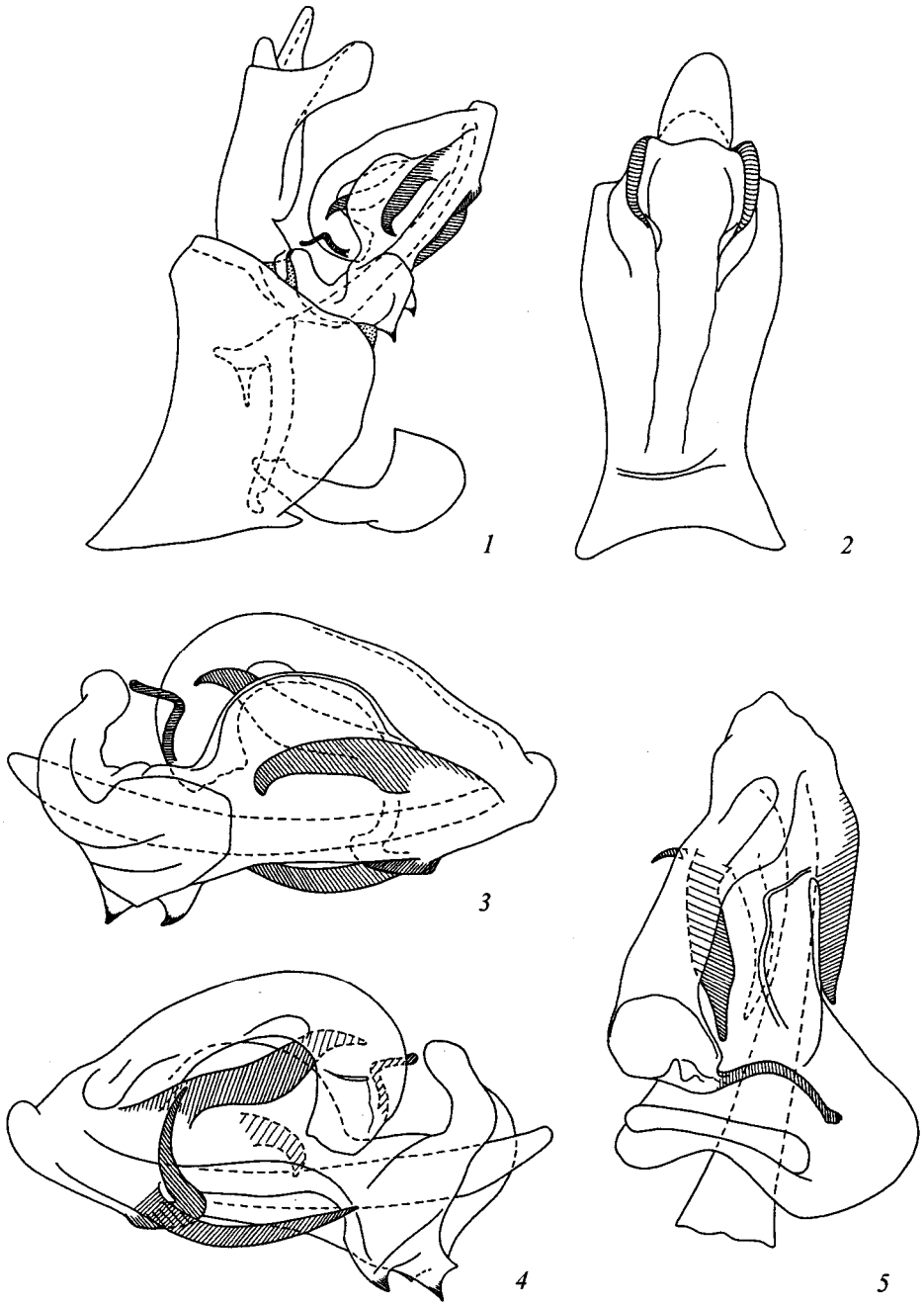

Fig. 9. *Caravella saccibuccis* sp. n., male genitalia: (*1*) genital apparatus, view from the left; (*2*) anal tube, ventral view; (*3*) penis, view from the left; (*4*) penis, view from the right; (*5*) penis, dorsal view.

lus, in contrast to *Cixius* Latr., *Achaemenes* Stål, and many others), but distinctly differs from it in the carinate tegula and in the mentioned characters of the structure of the coryphe.

Caravella saccibuccis Emeljanov, sp. n. (Figs. 7–9)

Description. Body pale, straw-colored, with small dark spots in anterior part. Head with 1 pair of black spots on lateral carinae of coryphe in posterior parts, 1 pair of spots at apices of epiclypeal lobes, and 1 pair of spots on gena at margin of metope in front of, and below ocellus. Pronotum whitish. Mesoscutum with 1 pair of rather vague dark spots in anterior part of disc and 1 pair in posterior part at sides of lateral carinae of disc. Fore wing almost entirely hyaline in clavocorial part, with pale semi-hyaline veins; only posterior claval area and entire apex of clavus with yellowish infuscation. Condensation of pterostigma brownish.

Membranous part of wing, beginning with nodal veins *rm* and *mcu,* mainly opaque, grayish yellow, with hyaline "windows" in places: entirely stigmal cell and following it series of marginal radial veins hyaline from margin of wing, but infuscate near other veins, radiomedian and first median cells similarly infuscate, but more strongly infuscate at margins; middle parts of anteapical cells *rm* and *im* also paler. Veins on opaque areas brownish. In addition, following dark brownish stripes and spots present: 3 oblique, widely spaced recurrent stripes in costal area, 1 transverse stripe in 1st apical cell *RP*, and 3 spots on submarginal crossveins *im, mcu* and *icua*; two last spots adjoining.

Length of male 5.8 mm.

Material. Holotype: ♂, Mexico, Tamaulipas, Gomez Farias, Alta Cimas, 900 m, Malaise trap. 21–28.X.2000 (Kasparyan).

Tribe **BRIXIINI**

Genus ***CIBRICA*** Emeljanov, gen. n.

Type species *Brixia longispinosa* Van Stalle, 1984.

Description. The genus is similar to the genus *Brixia* Stål in the following characters: head narrow, antenna long, wings steeply roof-like folded. However, lateral carinae of metope not approximate closely as those in typical *Brixia,* median carina of metope absent, acrometope as long as wide and separated from eumetope by weak carina. Anterior carina of coryphe sharp. Apical and preapical segments of rostrum subequal, rostrum slightly projecting beyond hind coxae.

Stalk *ScRM* distal to arc very short, shorter than arc; stigma narrow and long, lanceolate; median branching in ordinary way, with 3 branches *MA* and 2 branches *MP*, not contrary, as that of *Brixia*. Postclaval crossvein strongly oblique and elongate, as that of *Brixidia* Hagl. Veins *rm* and *mcu* of nodal row weakly outlined and situated distal to 1st branching of stalk *M*. On hind wing, anastomosis *M-Cu* short, desclerotized. Legs slender; hind tibia without lateral teeth, at apex with large outer tooth and row of 5 teeth, among which 2 median shorter than 3 inner; teeth of 2nd segment of hind tarsus with subapical setae.

Probably, the genus also includes *B. minor* V. St., *B. perate* V. St., and *B. dedegwana* Synave, 1960**,** which were related to *B. longispinosa* V. St. by Van Stalle (1984a); however, the description contains no character of the branching of the median on the fore wing.

Genus ***MELANDEVA*** Distant

Melandeva drymothea Emeljanov, sp. n.
(Figs. 10, 11).

Until now, only one species, *M. ocellata* Distant from the Himalayas, has been known in the genus. The new species is closely related to it.

Description. The genus *Melandeva* Distant appearing to be most closely related to the genus *Undarana* Hoch et Howard from northeastern Australia. It is characterized by the following features: border between vertex and occiput absent, upper side of head formed by transverse carina being posterior border of metope. Lateral carinae of metope high, leaf-shaped, deflexed forwards to make metope deeply groove-shaped, with weakly outlined median carina and cell apparently corresponding to acrometope. Lateral carinae of metope without clear border, forming a single whole with leaf-shaped lateral carinae of postclypeus, smoothly lowered toward anteclypeus and ended at its border; on anteclypeus, these carinae in form of simple carinae running in parallel to median carina nearly up to middle of anteclypeus and then deflexed medially, being connected with it (in *M. ocellate*, carinae not reaching median carina). At border between preocular and supraocular areas, wall of head capsule tubercle-like convex. Median ocellus shifted far from clypeal suture, median carina below ocellus absent. On postclypeus, median carina developed only in distal half. In lateral view, metope and postclypeus forming rather steeply sloping smooth arc. Lateral ocelli very large; antenna small, with rounded pedicel. Rostrum long, slender; ultimate segment slightly shorter than penultimate one; distal end of penultimate segment reaching apex of hind coxa.

Pronotum steeply roof-shaped, short in dorsal view, disc indistinct, anterolateral carinae of disc almost transversely diverging and passing into postocular carinae without distinct border, posterodiscal carinae absent, median carina sharp. Lateral carinae of pronotum oblique, sloping backwards; in anterior part, disappearing near postocular carinae. Posteroventral angle of paranotum acute-angled rounded. Mesoscutum large, its lateral lobes roof-like steeply sloping; lateral carinae slightly diverging backwards, sharp; median carina sharp, but slightly not reaching apex of mesoscutum.

Fore wing (Fig. 10, *1*) steeply roof-shaped, wide; costal and claval margins diverging; membrane rounded, more sharply rounded in anterior half. Costal

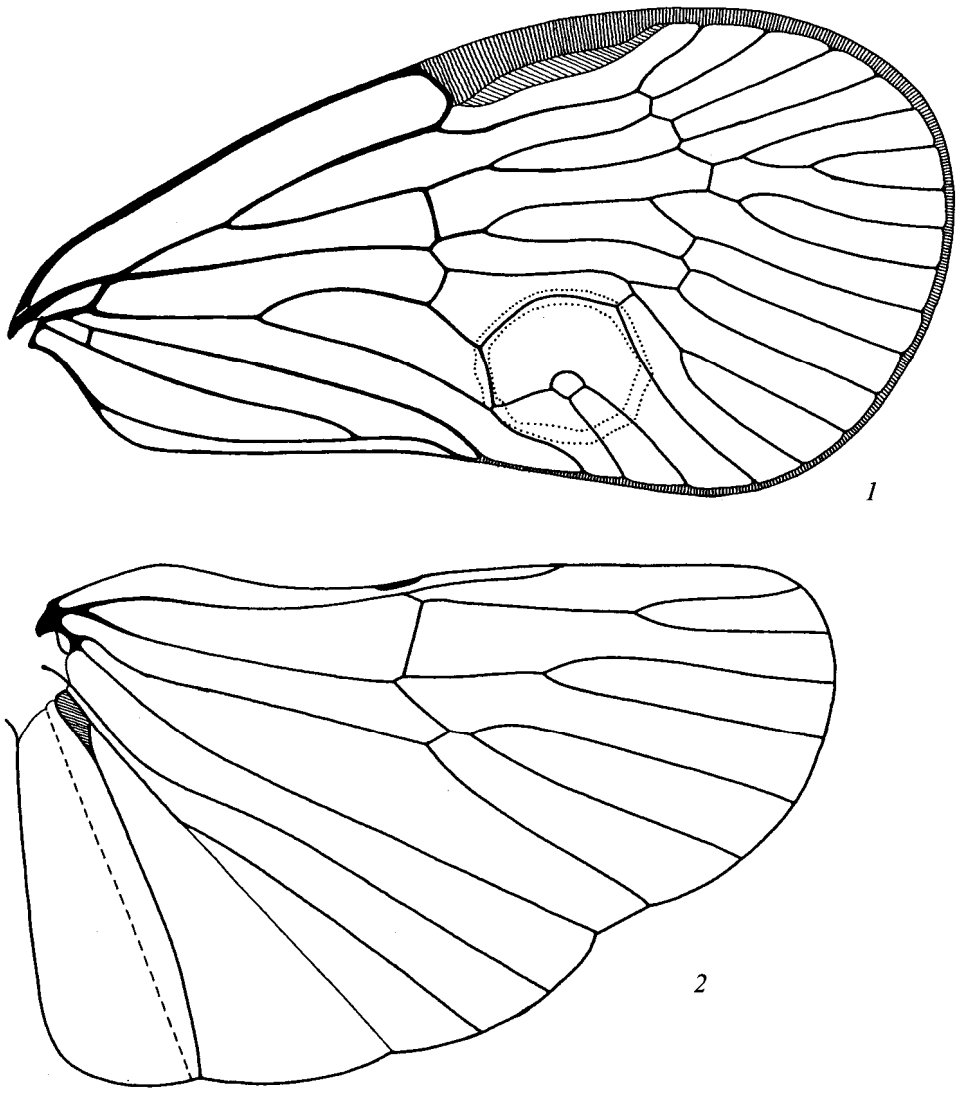

Fig. 10. *Melandeva drymothea* sp. n., wings: (*1*) fore wing (with contour of eye-shaped spot), (*2*) hind wing.

margin slightly concave near base. Stalk *ScR* about 1.5 times as long as basal cell, *ScR* and *M* originating from almost one point, nearly connected along distance equal to total width of veins. Basal cell with lanceolate inner margin. *ScR* branching before pterostigma; pterostigma at first narrowed, then parallel-sided, widely rounded at apex. *RA* two-pointed; *RP* five-pointed, only its posterior branch branching after postnodal cross-vein. *MA* four-pointed; all branchings, except for first one, formed by anterior branch also postnodally; *MP* three-pointed postnodally in anterior comb, first branching of *M* situated slightly before cross-veins *rm* and *mcu;* all branches of median after postnodal series of cross-veins with apices deflexed backwards, bypassing distinctive bend *CuA* bordering eye-shaped spot. *CuA* bifurcating slightly before middle of clavus, CuA_1 bifurcating opposite apex of clavus; anterior branch sharply broken, bending forwards, and then arcuately turning towards posterior margin, running straightly backwards at level of postnodal cross-vein, also angularly bending toward posterior margin after vein, but this section directed backwards by prominence as far as margin of wing. Vein CuA_2 reaching posterior margin of wing nearly without bends. Posterior branch of (first) branching of CuA_1 also sharply bending backwards, nearly reaching vein CuA_1, and turning forwards (forwards distally) nearly at right angle, then running backwards distally at same angle, bifurcating, with branches connected by cross-vein shortly after branching; small cell forming white "pupil" of large eye-shaped spot described below. Claval veins fused into 1 vein in distal 1/3, apex of this vein running into margin of wing near apex of clavus; first area of clavus with cross-vein closer to base.

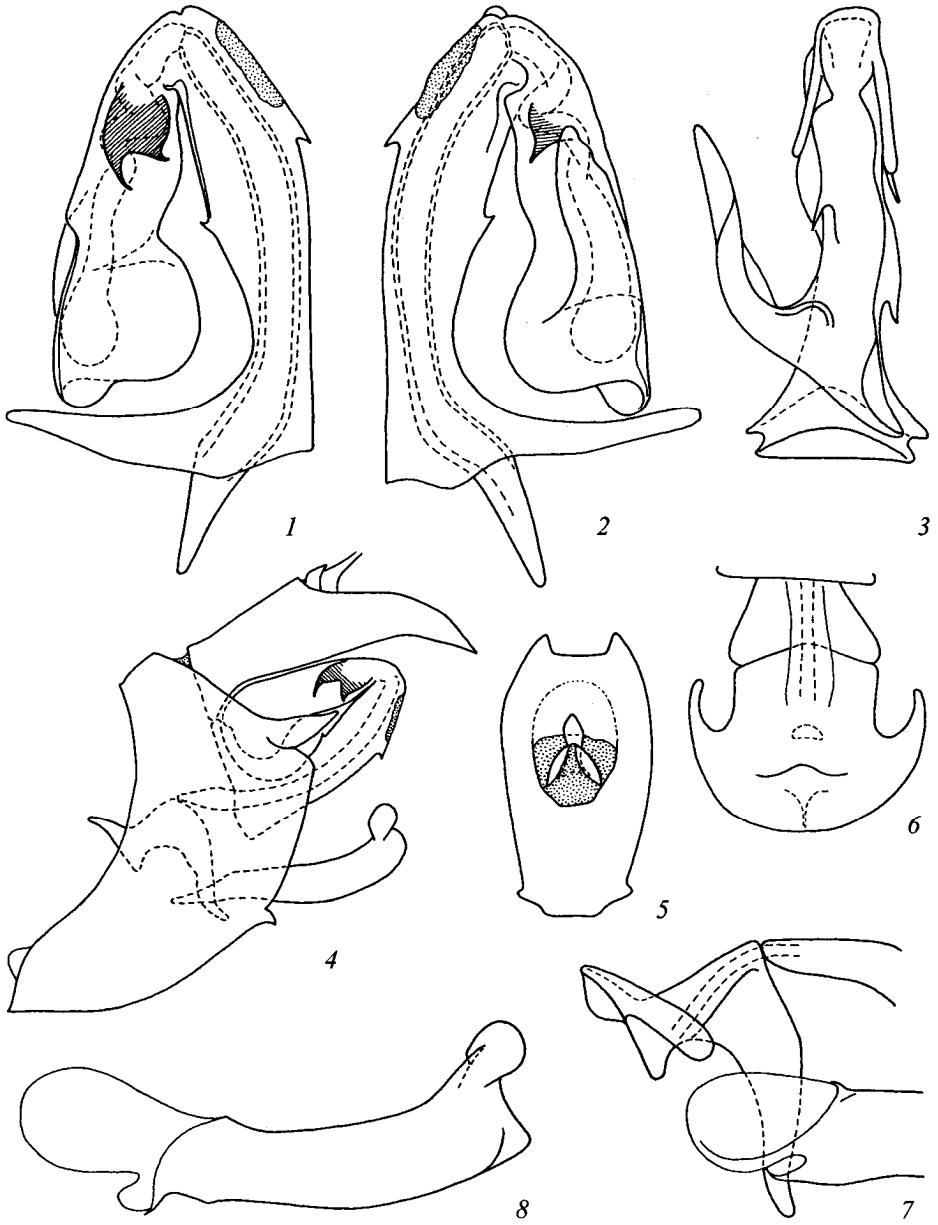

Fig. 11. *Melandeva drymothea* sp. n.: (*1–3*) penis [(*1*) view from the left, (*2*) view from the right, (*3*) dorsal view); (*4*) male genitalia, view from the left; (*5*) anal tube, dorsal view; (*6*, *7*) endoconnective [(*6*) dorsal view, (*7*) view from the left]; (*8*) stylus, lateral view (left stylus, view from the left).

Hind wing (Fig. 10, *2*) with two-pointed *RP*, both branches resting against terminal margin, anterior one, at apex of wing; vein *mcu* long, *MA* two-pointed, *MP* simple, CuA_1 two-pointed, and anastomosis shifted from place of first branching of *CuA*, that can be interpreted as presence of veins *MP* and *CuA* connected by short cross-vein, but the first variant is more credible. Fold dividing jugal lobe in middle part shifted from vein A_2, since this vein weakly arcuate.

Legs strong and rather long, hind tibia without lateral teeth, its apex bearing 6 teeth with brixioid type of arrangement. First segment of hind tarsus long, longer than 2 succeeding segments combined, its lower surface with large longitudinal oval depression covered with wax; apex of 1st segment with 8 teeth without subapical setae; 2nd segment with 8–10 teeth each bearing subapical seta, except for marginal ones.

Body mainly brownish. Longitudinal stripe extending from occiput to apex of postclypeus pale, leaf-shaped lateral carinae brownish. Gena, lorum, and anterior and upper edgings of eye pale, border between pale and brownish areas vague. Pronotum brownish,

its upper side frequently with dark spots apparently marking places of larval sensory pits. Mesoscutum slightly darker than pronotum, non-uniformly ("faded") brownish, carinae dark brownish; lower margins paler, in form of stripe wedge-like narrowed backwards to disappear (oblong-triangular) and bordered on upper side by vague dark brownish line (narrow stripe).

Fore wing brownish, semi-hyaline, with dark brownish veins and several dark brownish spots; posterior part of clavus more strongly infuscate, brownish. Costal area with 3 bracket-shaped spots in distal part; proximal spot beginning chain of similar spots forming band, chain angularly curved by prominence toward apex of wing; apex of angle of band formed by spot lying in fork *CuA,* latter spot lying in fork of claval vein near middle of clavus. Remarkable character of pattern: large and sharp eye-shaped spot lying behind apex of clavus in break of vein CuA_1. Anterior half of margin of nearly black spot formed by bifurcation of CuA_1, posterodiscal part of its margin running independently on veins, break of vein CuA_{1b} falling nearly to middle of black spot, its basal subquadrate cell filled with bright white dense wax coating and forming "pupil" of spot. Black spot bordered by distinct narrow pale ring; in anterior and basal parts, it running over veins becoming paler there; in other parts, spot extending over membrane, crossing veins CuA_{1b}; pale ring, in turn, with vague brownish edging; one more band formed by 3 bracket-shaped spots in last radial and median areas present in front of eye-shaped spot; indistinct spots present in area of postnodal cross-veins; apical 1/3 of membrane mainly brownish, but anterior margin with pale spot extending along costal margin and crossed by oblique dark brownish stripe.

Lower side of body, legs, and abdomen brownish to dark brownish.

In female, pregenital sternite elongate, acute-angularly projecting forwards; pygopher truncate in posterior part, and entire section occupied by wax area in form of equilateral triangle with widely rounded (nearly up to circle) angles. Ovipositor protruding, rather strong, moderately long, slightly longer than vertical diameter of wax area. Anal tube also protruding; in *M. ocellate*, it long and narrow, about 1.5 times vertical diameter of wax area, with distal part occupying about third of total length; in *M. drymothea*, length of anal tube distinctly less than length of ovipositor and height of wax area.

Male genitalia (Fig. 11). Pygopher with long ventral and short dorsal walls, posterior margin obtuse-angled projecting and bearing immediately above apex short knife-shaped process with sharp apex and convex lower margin, posteroventral process small and short. Anal tube moderately elongate, with concave lower surface and bidentate apex. Penis with long suspensorium; theca elongate, narrow, bearing small tooth on lower and upper sides, apex of theca with flat widenings (apparently, fused short processes) at sides, right widening bearing 1 tooth, left, 2. Distal segment lobiform widened from below on right, which (on left) passing into long recurrent process nearly reaching base of segment. Styli with small apices club-like bending upwards. General structure of genitalia similar to that of species of the genus *Andes* Stål.

Body length 12.4–13.3 mm in male, 12.6–14.0 mm in female.

Material. 2 ♂, including holotype, 8 ♀, Vietnam, Hoa Binh prov., Mai Chai distr., Pa Co, Xa Linh, 1120 m, 22–24.IV.2002 (Belokobylskij).

One specimen of *M. ocellata*, examined by me, was received for the study from the Muséum National d'Historie Naturelle (Paris): ♀, Nepal, Pied du Phulchoki, 6.VI.1986 (U. V.). Forêt de Godawari. 1500 m, J. Minet rec.

The species differs from the type species, *M. ocellata*, in the presence of a pale stripe on the face (in *M. ocellate*, entire face brownish) and in the nearly round eye-shaped spot (oblong-oval in *M. ocellate*).

Tribe **BRIXIDIINI**

Genus ***BRIXIDIA*** Haglund

Brixidia murzini Emeljanov sp. n. (Fig. 12)

Description. Head elongate, compressed. Coryphe narrow, concave, widened backwards, and very deeply acute-angularly emarginate from posterior margin (more than for 3/4 of its length). Metope narrow, groove-shaped because of high leaf-shaped lateral carinae directed forwards, narrower and shallower on upper side; transverse carina separating eumetope from acrometope, indistinct; acrometope about 1.5 times as long as wide. Lower margin of metope weakly concave; large ocellus situated near margin, at distance equal to 1.5 diameters of ocellus. Carinae of postclypeus continuing lateral carinae of metope lower, not extending onto anteclypeus. Clypeus e bearing distinct median carina not running onto metope.

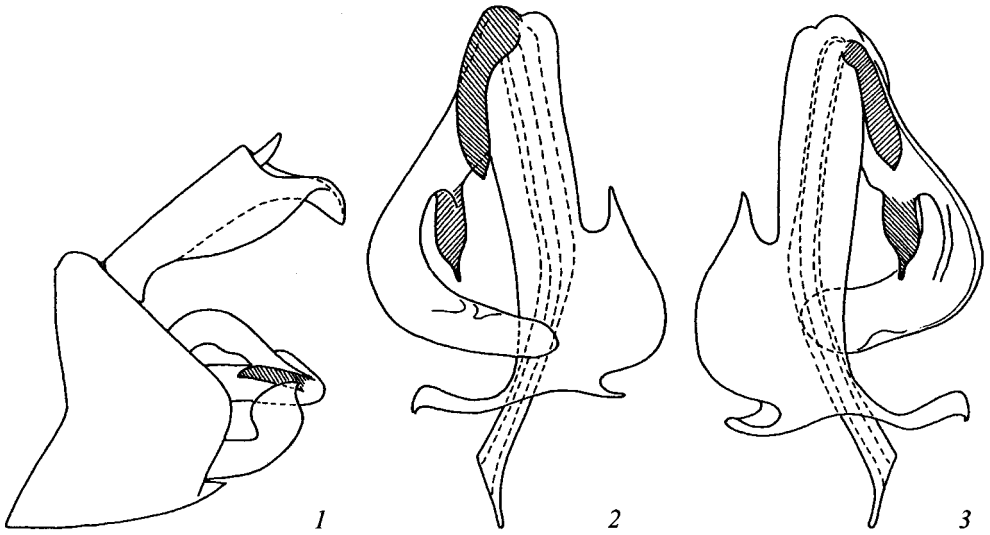

Fig. 12. *Brixidia murzini* sp. n.: (*1*) male genitalia, view from the left; (*2, 3*) penis [(*2*) view from the left, (*3*) view from the right].

Rostrum long, fine, extending far beyond hind coxae, with apical segment slightly longer than preapical one, their junction lying below hind coxae. Eyes more or less rounded, with emargination at lower margin above antennal bases. Antenna small; 1st segment ring-shaped; 2nd one subcylindrical, about twice as long as wide. Lateral ocelli as large as median one.

Pronotum narrow, narrowed behind eyes and widened toward lateral lobes. Disc small, narrow, triangular, with obtuse-angularly concave posterior margin. Lateral lobes of upper side sharply falling from disc. Postocular carinae sharp, ending at lower margin of eyes; lateral carina of upper side of pronotum weak, inclined downwards in antero-posterior direction. Mesoscutum large, elongate, with 3 sharp carinae and steeply sloping lateral parts.

Fore wing steeply roof-like folded, widened distally, with straight terminal margin roundly passing into anterior and posterior margins. Anterior margin gently convex in distal half, posterior margin of membrane forming gently sloping, concave obtuse angle with margin of clavus. Wing margin corrugated from apex of costa (base of pterostigma) to posterior branch of *CuA*. Stigma relatively narrow, with distinct vein at, not on posterior margin. First branching of *R* opposite middle of clavus, *RA* with 2 branches more distal than stigma, *RP* with 4 branches in anterior comb. *M* first branching at nodal level, *MA* two-pointed, *MP* three-pointed in anterior comb. *CuA* first branching opposite middle of clavus, CuA_2 branching again distinctly more basally than apex of clavus and, weakly S-curving, fused with margin rather far from its apex, replacing cross-vein between CuA_2 and margin of membrane. Two nodal cross-veins, *rm* and *mcu,* present: *mcu* arising after first branching of *MP, rm*, near base of *MA*. Postnodal row of cross-veins also present, it farther from apical margin of wing than from nodal row: ra_2–rp_1, rp_1–rp_2, rma_1, ma_2–mp_1, mp_1–mp_{2a}, mp_{2a}–cua_1, cua_1–cua_{2a}. Membrane with distinct concave longitudinal rugae behind forks in area of *rm* and in all areas of *M* system. Rugae considerably not reaching margin of wing.

Hind wing with bifurcate *RA,* excluding nodal branch of *ScRA*. RA_1 running into anterior margin of wing halfway from frenulum and *ScRA* to apex of wing. Margin of wing not bending after frenulum. Postradial area wide, vein *rm* long. *R* and *M* originating from arc as short stalk. Basal cell in form of parallelepiped, twice as long as wide. Arrangement of veins *M* and *CuA* in postnodal area typical, *MP* and CuA_1 forming short anastomosis, with membranous distal end; distinct folds absent. At distance slightly exceeding length of arc, *CuA* forming blind branch obliquely toward *CuP*, this branch continuing in form of folds and, reaching *CuP,* turning distally along it; in place of approaching, fold *CuP* bending with prominence directed backwards; *CuP* weakened from root to joining with fold. Vein A_2 slightly curved in basal 3/4, with prominence directed toward apex of wing; jugal fold running as chord distant from A_2 except for its ends.

Legs long and slender, fore femur slightly longer than half of tibia, middle and hind femora subequal to half length of tibiae. Hind tibia without lateral teeth, with 6 teeth at apex, with inner tooth of inner group

longest. First segment of tarsus with 7 teeth alternating in length, subapical setae absent; 2nd segment with similar number of teeth, but subapical setae present, and teeth less strongly differing in length.

Integument yellowish brown, without distinct pattern; ridges of carinae on head slightly darkened; legs darker than body; abdominal sclerites darker, up to brownish. Fore wing semi-hyaline, with rather poor dark brownish pattern. Irregular dark bands interrupted in places running along nodal line and over system of postnodal cross-veins. Before nodal band, transverse row present, formed by 3 spots in radial, median, and anterior cubital areas; 3rd spot lying immediately after bifurcation of *CuA*. Clavus with 2 spots in transverse row more basal than corial ones at level before branching of *CuA* and up to merging of *Pcu* and A_1. Band near apex of wing wider, not smooth, weakly bending by prominence toward base of wing, connected by crosspiece with spot lying distal to band half-way to margin of wing. Spots near anterior and posterior margins of wing, as though remains of broken band between postnodal and subapical bands (as those in *B. nebulosa* Hagl.), small, vague, partly merged with subapical band. On hind wing, veins more or less infuscate, and vein *rm* strongly and widely infuscate.

The species clearly differs from all the known species (Synave, 1980) in the structure of the male genitalia (Fig. 12), in particular, the structure of the anal tube with the posterior margin spout-like attenuate in the middle. In the shape of the theca and its lower carina, the species is similar to *B. boukokoensis* Syn., however, the apical processes of its theca are short, lower ones are absent, and the distal segment bears only one process in the lower part on the left.

Body length 11.2–11.4 mm in male, 12.2–12.4 mm in female.

Material. Holotype: ♂, RPR Guinée, env. Kindia, Tabuna vallée, II.1983, S. Murzin. Paratypes: 1 ♂, 1 ♀, as holotype; 1 ♀, environs of Kindia, 22.I–10.II.1982, S.V. Murzin.

Tribe **DUILIINI**

Genus ***DUILIUS*** Stål

Owing to a courtesy of Dr. P. Lindskogk (Swedish Museum of Natural History, Stockholm) and Dr. T. Burguena (Muséum National d'Historie Naturelle, Paris) I have examined the type series of *Duilius tenuis* Stål, 1855 and *Duiliopsis balachowskyi* Bergevin, 1933 (Fig. 13, 6, 7) of the monotypic genera *Duilius* Stål and *Duiliopsis* Bergevin and have established their synonymy with the well-known Palaearctic genus *Hemitropis* Fieber. The priority name is *Duilius* Stål, 1855 (*Hemitropis* Fieber, 1866; *Haplacha* Lethierry 1874; *Duiliopsis* Bergevia, 1933; *Bitropis* Dlabola, 1985). The synonymy of *Duilius* and *Hemitropis* was first indicated by Oshanin (1907) and later, by Dlabola (1952). Dlabola (1985) later described the genus *Bitropis,* separating it from *Hemitropis.* I suppose that *Bitropis* should be regarded as a subgenus of the genus *Duilius,* as well as *Duiliopsis*, characters of which relate *Bitropis* and *Duilius* s. str. The type species of the genus *Duilius* is known only from females, it is closely related in the external morphology to the recently described Iranian-Turanian *D. v-atrum* Dlab. The names *Haplacha* and *Hemitropis* are synonyms of the nominotypical subgenus. A key to differentiation of the subgenera is given below.

1 (4). Hind tibia with 1 lateral tooth or without lateral teeth. Ventral wall of theca without processes and almost always without teeth, rarely with 1 small tooth.

2 (3). Hind tibia without lateral teeth .... Subgenus *Duilius* Stål.

3 (2). Hind tibia with 1 lateral tooth in proximal 1/3 ... . Subgenus *Duiliopsis* Bergevin.

4 (1). Hind tibia with 2 lateral teeth. Ventral wall of theca with process and teeth .... Subgenus *Bitropis* Dlabola.

The distribution range of the genus (respectively, that of the tribe) is mainly limited to the deserts of the Ancient Mediterranean Area and includes a separate area in South Africa, similarly to *Tamarix*, a host-plant of most species of this group. All the species of the subgenus *Duilius*, for which the trophic specialization is known, are associated with *Tamarix*: *D. fasciatus* Horv. of the subgenus *Bitropis* and *D. balachowskyi* of the subgenus *Duiliopsis*; some species of the subgenus *Duilius* have also been recorded on broad-leaved species of the genus *Reaumuriai,* family Tamaricaceae. Among the representatives of the subgenus *Bitropis*, *D. fasciatus* feeds on *Tamarix*, *D. limonii* Em., on *Limonium suffruticosum* (family Plumbaginaceae), *D. halimus* Mit., on *Halostachys* and *Kalidium* (family Chenopodiaceae), and *D. logvinenkoae* sp. n., on not identified species of Chenopodiaceae.

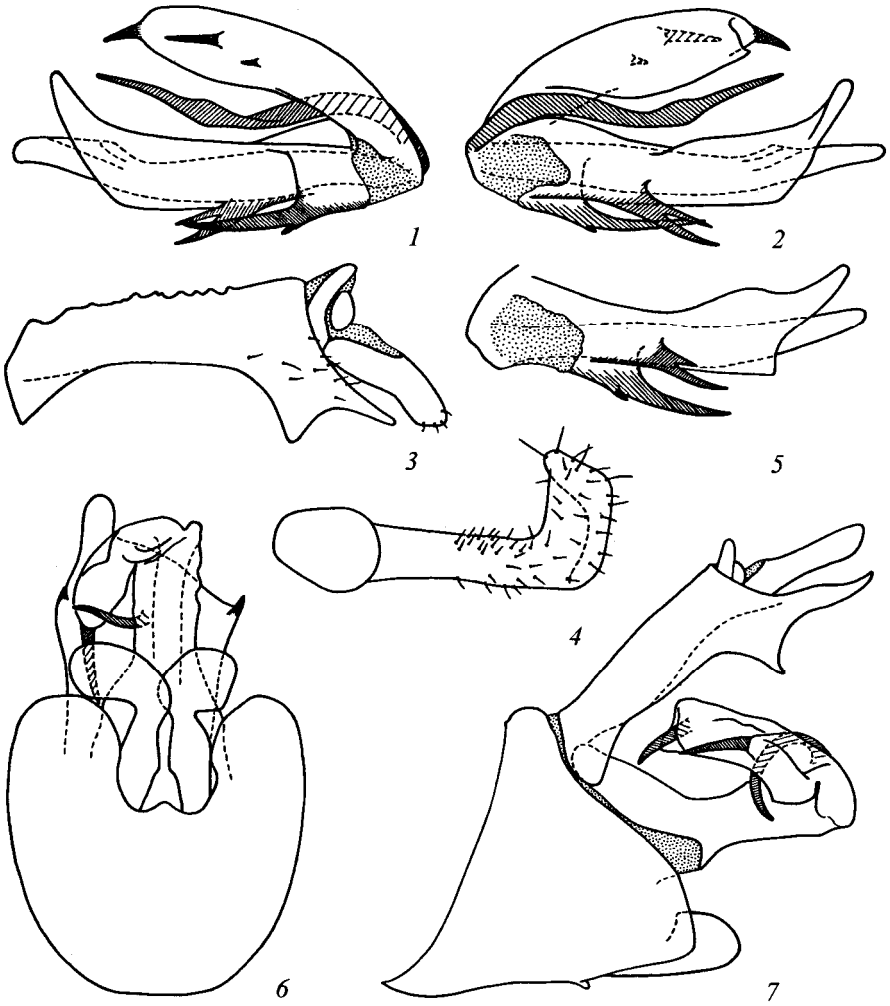

Fig. 13. *Duilius,* male genitalia: (*1–4*) *D. logvinenkoae* sp. n [(*1*) penis, view from the left; (*2*) penis, view from the right; (*3*) anal tube, view from the left; (*4*) left stylus, view from the left]; (*5*) *D. fasciatus* Horvath, theca, view from the right; (*6, 7*) *D. balachowskyi* Bergevin, genitalia [(*6*) ventral view, (*7*) view from the left].

Duilius logvinenkoae Emeljanov, sp. n. (Fig. 13, *1–4*)

Description. The species is closely related to *D. fasciatus* Horv., but differs from it in the fore-wing pattern and in details of the structure of the male genitalia. Head with coryphe narrowed forwards and acrometope parallel-sided; anterior border of acrometope not expressed, without carina; anterior border of coryphe in form of obtuse-angled concave transverse carina; median carina of head extending from occiput about up to border with clypeus. Postclypeus strongly swollen. Pronotum with prominence running at border of anterodiscal and postocular carinae and outlining end of posterodiscal carina. Head and pronotum pale, slightly yellowish or brownish. Mesoscutum reddish brown, not bright; tegula yellowish brown. Fore wing pale, grayish white, with cells weakly appearing through. Granules on veins slightly infuscate. Membrane usually with not bright, brownish pattern. Apex of costal area shaded by brownish; brownish vague spot also present distal to pterostigma; similar spot present in apical radial cell at margin of wing; all other cells in terminal area of wing infuscate from outer margin, dark area becoming paler toward posteromedial cell; 1st cubital cell with vague brownish spot at margin of wing, this cell of same size and structure as that in anterior part of membrane; in addition, smaller spot present at apex of clavus. Cross-veins of postnodal row nearly white, shaded by brownish at sides, apical cells sharply darkened at ends and less strongly, in second 1/4 of length, where membrane bearing vague, paler band. Intervals between brownish spots of anterior margin of wing on pterostigma and on apical

interradial cell white. In less strongly pigmented individuals, only dark terminal stroke in radiomedial cell and spot in mediocubital cell remaining against background of brownish membrane. Lower side of body pale, whitish and brownish.

In the structure of the male genitalia, the species is closely related to *D. fasciatus* (Fig. 13, *5*), but differs from it in the structure of the processes of the theca: lower processes not parallel, their apices crossing in lateral view, as left process running more or less in parallel to margin of theca, and right one obliquely arisen; basal margins of bases of processes more strongly moved apart.

Body length 3.2–3.4 mm in male, 3.2–3.7 mm in female.

Material. Azerbaijan, 5 ♂ (including holotype), 6 ♀, Kobustan, 28.V.1981, 8 ♂, 6 ♀ (Ermolenko, Kotenko); Zarat, 29.VI.1973 (Logvinenko); Baku, 19.VI.1972, 1 ♀ (Logvinenko) (Institute of Zoology, National Academy of Sciences of the Ukraine, Kiev).

Tribe **GELASTOCEPHALINI**

Genus ***CICERAMA*** Emeljanov, gen. n.

Type species *C. mostovskii* sp. n.

Description. The genus is outwardly similar to the genus *Aselgeoides* Dist., but differs in the absence of an apical cell on the head process. Head elongate (Fig. 14, *3–5*). Coryphe narrow and long, gently sloping groove-shaped, slightly narrowed forwards; its sides slightly depressed toward each other before apex to form weak constriction; median carina slightly outlined at posterior margin; apical margin obtuse-angled, posterior margin nearly straight, lying approximately opposite middle of eyes. Length of coryphe more than 3 times its width; 2/3 of length of coryphe projecting in front of eyes. Metope widest opposite bases of antennae, slightly narrowed toward clypeus, considerably narrowed (up to 4 times) toward apex of head; its sides there weakly concave along significant distance; metope before apex subparallel-sided, sharply narrowed toward apex; median carina sharp, elevated in apical third, lateral surfaces of metope visible there in lateral view as lanceolate figure. Border with postclypeus weakly obtuse-angularly and roundly concave. Median ocellus small, distinct. Postclypeus approximately triangular, with sharp carinae; its lateral carinae passing onto anteclypeus, disappearing slight before median carina near middle of anteclypeus. Nearly half of length of apical segment of rostrum extending beyond hind coxae; preapical segment of rostrum about 1.5 times as long as apical one. Antenna rather large, 2nd segment nearly spherical. Lateral ocelli large. Faceted part of eye above antenna with deep emargination.

Pronotum very short in middle part; disc narrow, entirely situated in posterior emargination of head between eyes, two-sloped groove-shaped; lateral carinae of disc and carina of posterior margin of pronotum merged into one carina behind eyes along some distance. Lateral parts of pronotum wide, postocular carina without passing into pectoral carina without break, lateral carina resting against it. Posterior margin of pronotum with acute-angular emargination in middle. Mesoscutum large, nearly rhomboid-square, with 3 relatively approximate carinae, two lateral carinae moderately diverging backwards. Tegula with smoothened rudiment of longitudinal carina.

Fore wing (Fig. 14, *1*) elongate, slightly widened up to half length of membrane, then membrane semi-elliptically rounded. Pterostigma narrow and long, wedge-shaped; stigmal cell with longitudinal row of setae, longitudinal veins with setae. Median branching at nodal level, five-pointed (3 + 2); *CuA* branching opposite middle of clavus at level of fusion of claval veins. Postclaval cross-vein shifted from apex of clavus for distance equal to its length, membrane with 1 row of cross-veins. *ScR* bifurcating slightly more basally than *CuA*. *ScR* and *M* originating from basal cell in one point.

Hind wing (Fig. 14, *2*) moderately slender, with rather narrowly rounded apex. Branch *ScRA* fused with margin of wing slightly distal to coupling lip, i.e., very early; *RP* arisen under coupling, two-pointed; vein *rm* long, *RP* without distinct break in place of fusion with *rm;* stems *ScR* and *M* originating from basal cell as short stalk; *MA* two-pointed; anastomosis *MP* and CuA_1 short.

Legs slender, of medium proportions. Hind tibia with 3 lateral, and 6 apical (3 + 3) teeth separated by diastema. Hind tarsus long, with long basal segment bearing 7 or 8 apical teeth without setae; 2nd segment bearing 10 teeth with subapical setae, except for lateral ones, setiferous teeth very poorly developed.

Ovipositor arcuate, normally developed; wax area reduced, developed only below distal half of ovipositor.

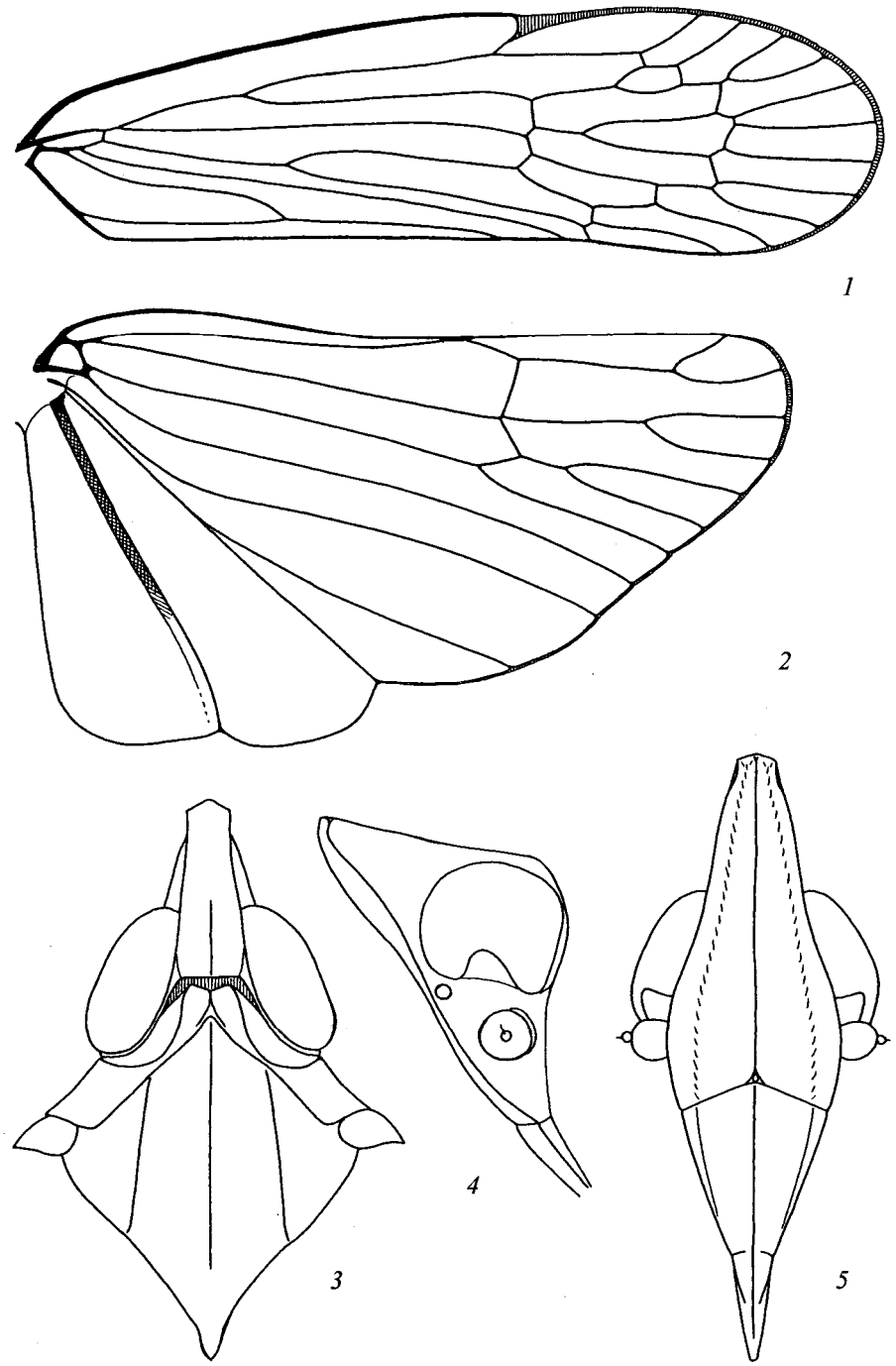

Fig. 14. *Cicerama mostovskii* gen. et sp. n.: (*1, 2*) wings [(*1*) fore, (*2*) hind]; (*3*) anterior part of body, dorsal view; (*4*) head, lateral view; (*5*) head, view from the left.

Male unknown.

The placement of the new genus in the tribe Gelastocephalini is provisional. This genus is similar to representatives of the tribe in habitus and general kind of the coloration. The arrangement of the teeth at the apex of its hind tibia into two groups separated by an interval is typical of Gelastocephalini, but also of Oecleini, to which *Cicerama* is not similar, and for some representatives of Pentastirini. This character is juvenile, in the ontogenesis of larvae of Cixiidae it precedes the stage with the close teeth and, therefore, can appear convergently (in parallel) in different groups.

Cicerama mostovskii Emeljanov, sp. n. (Fig. 14)

Description. Body mainly reddish brown. Coryphe, except for lateral carinae, darkened; carinae pale; apex of metope and upper part of lateral surfaces of head, adjacent to coryphe, also darkened, except for carina remaining pale. Lateral lobes of metope opposite antennae also pale. Lateral parts of prothorax behind eyes vaguely paler, tegula also paler than mesoscutum. On mesoscutum, intervals between carinae darkened to black. Fore wing nearly hyaline. Cells slightly brownish; veins reddish brown, with dark setiferous granules. Lower side of body and legs brownish to dark brownish, ovipositor more sharply dark brownish to black.

Body length of male 7.4–8.6 mm.

Material. South Africa. Holotype: ♀, Kwazulu-Natal, Royal Natal N Park, 1425 m, 28°41′S, 28°56′ E, Malaise trap streem y-wood, 10–13.XII.2004 (M. Mostovski) (Natal Mus.). Paratypes: 1 ♀, Cathedral Peak, Didima, 1422 m, 28°57′S, 29°14′E, 13–16.XII.2004 (M. Mostovski) (Natal Mus.); 2 ♀, Cathedral Peak, Didima, 15.II.2005/(D.Sh. Shcherbakov), at light (ZIN).

ACKNOWLEDGMENTS

The author is grateful to all collectors, especially to S.A. Belokobylskij, M.G. Volkovitsh, and D.R. Kasparyan, who have granted their remarkable material on cicadas to the Zoological Institute, Russian Academy of Sciences, St. Petersburg. The author is also grateful to Dr. M. Mostovsky (Natal Museum, Pietermaritzburg) for the material from the Natal Museum, supplied for examination.

The collection of the Zoological Institute, Russian Academy of Sciences, St. Petersburg (UFK ZIN reg. 2-2.20), containing the material used in the work, is supported by a contract with Rosnauka no. 02.452.11.7031 (2006-RI-26.0/001/070).

REFERENCES

1. Dlabola, J., "Einige neue paläarktische Zikaden und andere faunistische Bemerkungen," Acta Entomol. Mus. Nat. Pragae **28** (397), 27–37 (1952).
2. Dlabola, J., "Neue Cixiiden von Iran, Nachbarländern und andren Mediterrangebuten (Homoptera, Auchenorrhyncha)," Acta Entomol. Bohemoslov. **82**, 95–128 (1985).
3. Fennah, R.G., "Fulgoroidea from the Cayman Islands and Adjacent Areas," J. Natur. Hist. **5**, 299–342 (1971).
4. Kramer, J.P., "Taxonomic Study of the Planthopper Genus *Oecleus* in the United States (Homoptera: Fulgoroidea: Cixiidae)," Trans. Amer. Entomol. Soc. **103**, 379–449 (1977).
5. Kramer, J.P., "Taxonomic Study of the Planthopper Family Cixiidae in the United States (Homoptera: Fulgoroidea)," Trans. Amer. Entomol. Soc. **109**, 1–58 (1983).
6. Oshanin, V.F., *Verzeichnis der Palaearktischen Hemipteren mit besonderer Berücksichtigung ihrer Verteilung in Russischen Reiche, Vol. 2. Homoptera* (St. Petersburg, 1908), Vol. 2.
7. Synave, H., "Les Cixiidae de Madagascar (Hemiptera–Homoptera)," Mem. Inst. Sci. Madagascar **7**, 167–196 (1956).
8. Synave, H., "Le genere *Brixidia* Haglund (Homoptera–Cixiidae)," Bull. Inst. R. Sci. Natur. Belg. (Entomol.) **52** (4), 1–15 (1980).
9. Van Stalle, J., "Les Cixiides de la forêt de Taï (Côte d'Ivoire) description de neuf espéces nouvelles (Homoptera, Fulgoroidea)," Revue Entomol. Fr. (N.S.) **6** (3), 137–146 (1984a).
10. Van Stalle, J., "New and Interesting African Cixiidae (Homoptera, Fulgoroidea) with Notes on Synonymy," Ann. Zool. Fenn. **21**, 105–128 (1984b).