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New Genera and New Species of the Family Achilidae (Homoptera)

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Abstract—Six new genera from Australia (five genera of the tribe Achilini and one genus of Rhotalini) and one genus from Equatorial Africa (tribe Achillini) are described. The following new species are also described: *Katbergella bastet* sp. n. from South Africa (tribe Mycarini), *Kosalya concludens* sp. n. from Primorskii Territory, Russia (tribe Plectoderini), *Cixidia polisa* sp. n. from Krasnodar Territory, Russia, *C. kabakovi* sp. n. from Afghanistan (tribe Achilini), and *Achilla nix* sp. n. from Equatorial Africa (tribe Achillini). Four genera, including a new one, are placed in the tribe Rhotalini: *Rhotala* Walker (*Chiotasa* Melichar), *Errada* Walker, *Hebrotasa* Melichar, and *Errotasa* gen. n. (type species *E. neovalesiaca* sp. n.). The genus *Ouwea* Distant is resurrected from the synonymy with *Catonidia* Uhler. *Epirama sikokuana* Matsumura is transferred to the genus *Cixidia* Fieber (*C. sikokuana* Mats., comb. n.).

The paper includes description of new genera and species from Australia, Africa, and Asia, including the Russian part. The material examined was received from museums of Australia, the Great Britain, France, Poland, and the USA: American Museum of Natural History (New York, USA) [AMNH]; Australian Museum (Sydney) [AMSA]; Australian National Insect Collection (Canberra) [ANIC]; Natural History Museum (London) [BMNH]; Zoological Institute, Polish Academy of Sciences (Warszawa) [IZPAN]; Muséum National d'Histoire Naturelle (Paris) [MNHN]; Agricultural Scientific Collections Trust, New South Wales Agriculture (Orange) [NSWA]; United States National Museum (Washington) [USNM]; Zoological Institute, Russian Academy of Science (Saint Petersburg) [ZIN].

The type material for comparison was received from the Naturhistoriska Riksmuseem (Stockholm, Sweden) and Moravian Museum (Brno, Czech Republic). The collections of the Zoological Institute, Russian Academy of Sciences, (St. Petersburg, Russia) were also used.

Depositories of new species are indicated for each species in the section "Material."

Tribe **RHOTALINI** Fennah, 1950

Four genera are clearly distinguished in the tribe, their differences are shown in a key below. The structure of the head most clearly differs. The structure of the genitalia in the tribe has been examined very poorly, and genital characters cannot be used yet for differentiation of genera.

The genus *Errada* Walker, 1870 comprises the following species: *E. funesta* Walker, 1870 (type species); *E. nebulosa* (Distant, 1914), comb. n. (*Rhotala nebulosa*); *E. ambigua* (Fowler, 1906), comb. n. (*Rhotala ambigua*); *E. ibukisana* (Matsumura, 1914), comb. n. (*Rh. ibukisana*); *E. jozankeana* (Matsumura, 1914), comb. n. (*Rh. jozankeana*); *E. nawae* (Matsumura, 1907), comb. n. (*Rh. nawae*); *E. niisimae* (Matsumura, 1905), comb. n. (*Rh. niisimae*); and *E. vittata* (Matsumura, 1907), comb. n. (*Rh. vittata*).

The genus *Errotasa* gen. n. includes *E. neovalesiaca* sp. n. (type species); *E. philippinensis* (Distant, 1907), comb. n. (*Rhotala philippinensis*); and *E. valdiviana* (Fennah, 1965), comb. n. (*Rhotala valdiviana*).

The genus *Rhotala* Walker, 1857 (= *Chiotasa* Melichar, 1914, syn. n.) comprises *Rh. delineata* Walker, 1857 (type species) and *Rh. maculata* (Melichar, 1914), comb. n. (type species of the genus *Chiotasa*).

The genus *Hebrotasa* Melichar, 1914 includes *H. elongata* Melichar, 1914 (type species) and *H. madagascariensis* sp. n.

Genus ***ERROTASA*** Emeljanov, gen. n.

Type species *E. neovalesiaca* sp. n.

This genus is closely related to *Errada* Walker. The following main characters of the tribe are well pro-

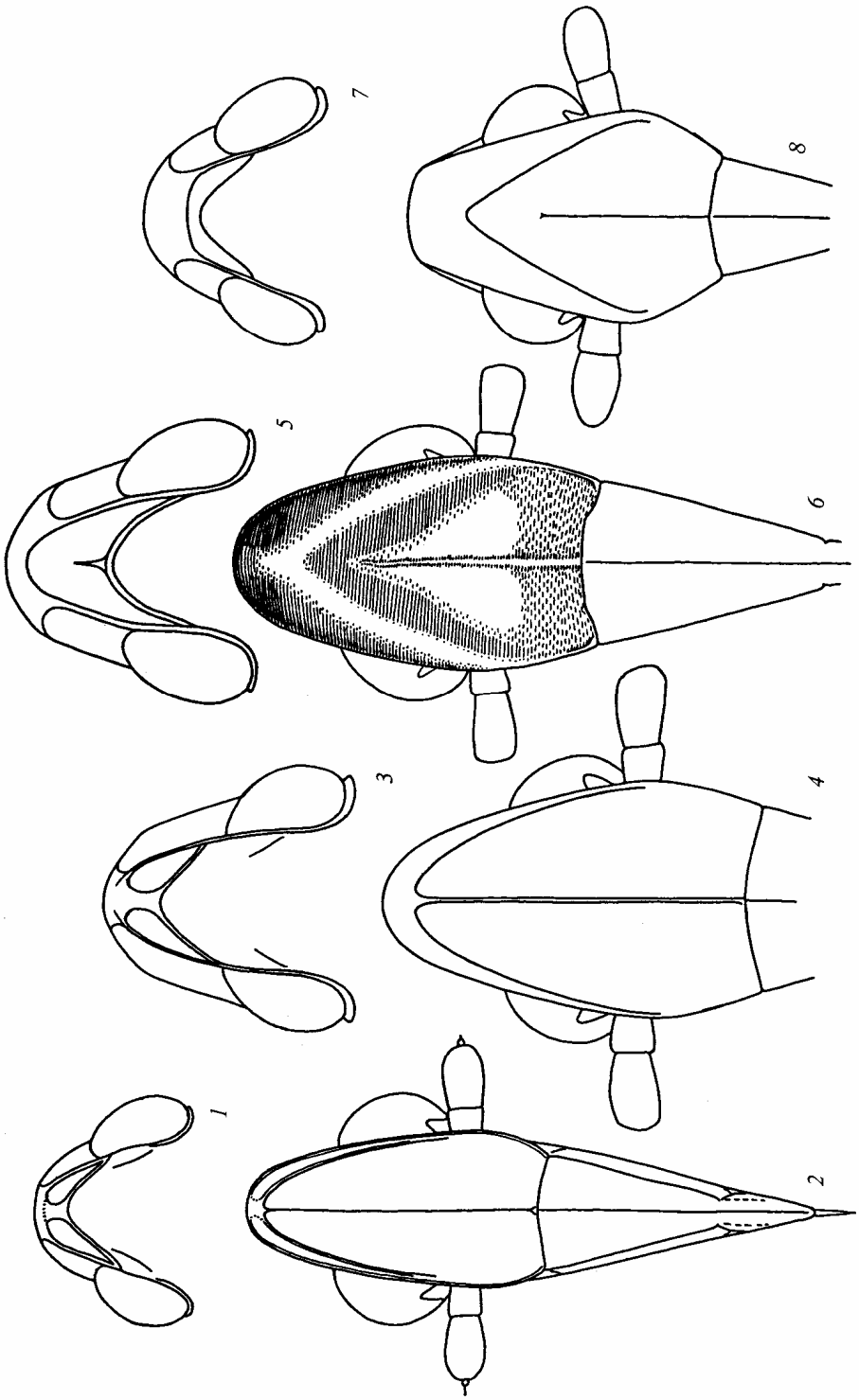

Fig. 1. Tribe Rhotalini, head in dorsal view (*1*, *3*, *5*, *7*) and face (*2*, *4*, *6*, *8*): (*1*, *2*) *Errada nawae* Mats.; (*3*, *4*) *Errotasa neovalesiaca* gen. et sp. n.; (*5*, *6*) *Rhotala* (*Chiotasa*) *maculata* Mel.; (*7*, *8*) *Hebrotasa elongata* Mel.

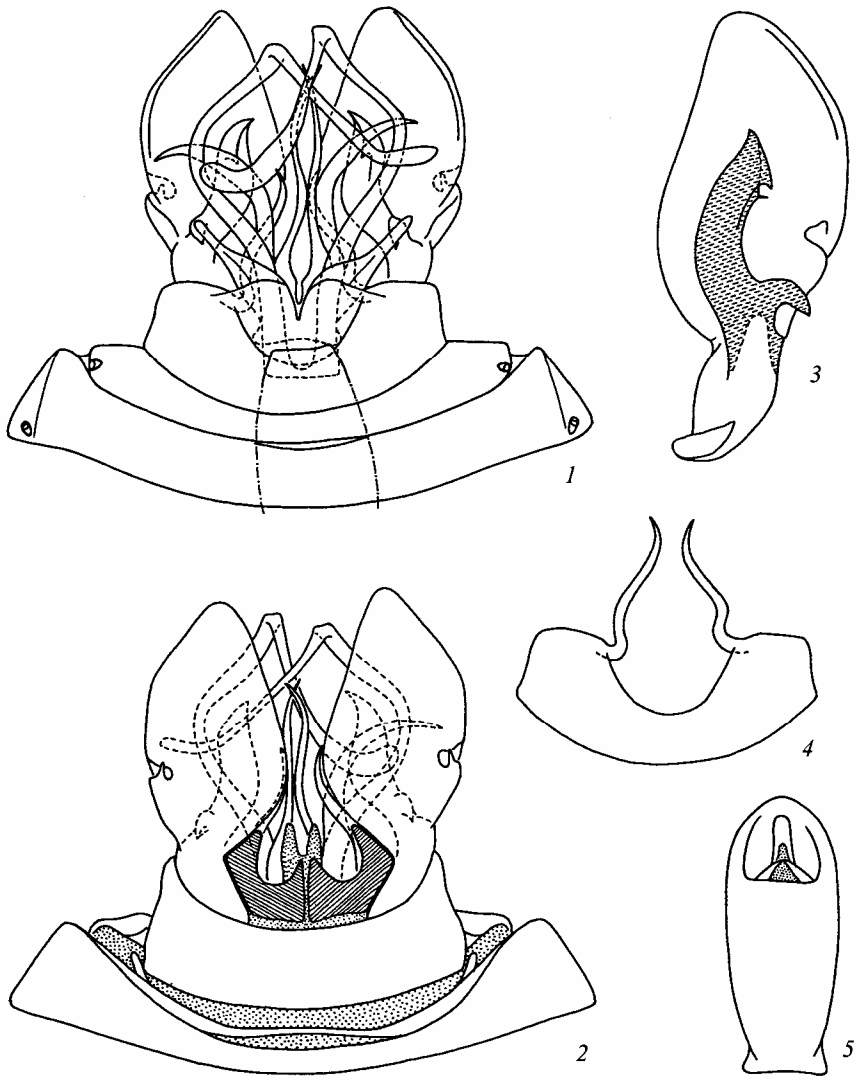

Fig. 2. *Errotasa neovalesiaca* gen. et sp. n., male genitalia: (*1*) abdominal apex, dorsal view (anal tube removed); (*2*) abdominal apex, ventral view; (*3*) stylus, dorsomedial view; (*4*) pygophore, dorsal view; (*5*) anal tube, dorsal view.

nounced: pronotal disc projecting far forward, venation of posterior part of fore-wing membranule typical, 5 or 6 lateral teeth present on hind tibia. A distinctive character of the genus are the lateral and intermediate carinae of the metope fused in a rather narrow and distinct carina, the metope very strongly shifted forward relative to the eyes, and the median carina remaining. Differences of this genus from other genera of the tribe are in a key below. For other characters, see description of the type species.

Errotasa neovalesiaca Emeljanov, sp. n. (Fig. 2, *1–5*)

Description. Male. Body fuscous or pale fuscous, with speckled pattern. Carinae of coryphe pale, cells dark. Apical callous pale, with crosswise pattern and 1 pair of dark punctures at sides near margin of metope. Metope fuscous, lateral carinae with pale specks, disc with 1 pair of obliterated pale areas in middle part. Postclypeus fuscous, with 1 pair of oblique pale spots at sides near metope and rounded median spot divided into two parts by dark median carina. Sides of anteclypeus paler in basal half. Genae pale, with 3 dark spots. Lora paler. Preocular area fuscous, with darkened (to black) upper margin; supraocular area above it pale, extending in the form of pale stripe onto outer declivities of pronotal disc and then up to middle of lateral lobes of pronotum. Lateral parts of lateral lobes fuscous, with darkened (to black) boundary with pale stripe. Pronotal disc speckled, pale fuscous. Paranotal lobes fuscous on upper and poste-

rior sides; yellowish white on anterior and lower sides, with 2 dark speckles; this pale area common with pale genae; boundary of fuscous darkening with black tint, bearing black prominence merged with margin. Mesonotum speckled fuscous, with 1 pair of black punctures in middle part of disc; apex of scutellum pale. Fore wing with speckled pattern. First anal vein with oblique yellowish fuscous striae. Part of membranule (beginning with apex of clavus), which covered in rest by membranule of other wing, paler, with more abundant cross-veins; black oval spot situated outward of covered area in first radial area. Sides of mesonotum with black, fuscous, and pale spots. Metathorax almost entirely fuscous. Legs fuscous, femora with pale subapical band, fore and middle tibiae with 3 pale bands: median one wider; hind tibia fuscous, bearing pale lateral teeth with black apices. Tarsi fuscous, apices of segments paler. Abdomen fuscous, with darker margins of sclerites.

Male genitalia. Pygophore rather short, with dorsal emargination behind base of anal tube; posterolateral angles of emargination with long rod-shaped processes. Anal tube long, narrow, flat. Styli rather wide, spoon-shaped, with very large dorsobasal process and small but distinct emargination lying at outer margin and bearing obtuse tooth. Paired plates separated from pygophore situated on lower side between bases of styli. Fennah (1950) consider these plates as having separated teeth of the pygophore. Phallotheca articulated with pygophore at posterior angles of dorsal emargination and, correspondingly, at bases of above described processes of pygophore. Theca symmetrical, divided nearly up to base into 4 pairs of narrow process-shaped lobes. Dorsal lobes widest, with digitate attenuate apices diverging lateracaudally; second pair narrow, long, with tapered apices pointing backward; third pair in the form of stronger, but shorter hook-shaped processes with apices curved outward; fourth ventral pair in the form of thick nonsclerotized processes. Hooks of penis long, angular, crossing; apical segments pointing forward and sideward. Subgenital sternite (VIII) free, strongly narrowed, narrowest in middle part.

Body length 7.1 mm.

Female unknown.

Material. Holotype: ♂, Australia, New South Wales, Mooney Mooney Ck. nr. Gosford, 15.XII.1989 (D.K. McAlpine) (AMSA).

Genus ***HEBROTASA*** Melichar, 1914

Hebrotasa madagascariensis Emeljanov, sp. n.
(Fig. 3, *1–4*)

This genus and, in particular, the species described differ from *Rhotala* Walker, s. str. in having a large callus-shaped swelling at apex of the head process.

Description. Female. Lateral carinae of metope thickened and widened toward this swelling and looking like its processes lowering toward clypeus at margins of metope. Median carina of metope obsolete, vanishing in upper part. Coryphe reduced to semilunar transverse depression, before which larger upper part of apical swelling situated. Middle part of posterior margin of coryphe lying at level of anterior margin of eyes. Pronotal disc lancet in anterior part, about third of its length projecting forward beyond anterior margin of lateral parts of pronotum. Ill-defined subapical carinae present in posterior part below lateral carinae of pronotum. Posterior margin of disc gently roundly obtuse-angularly emarginate. Forewing venation as that in representatives of the genus *Rhotala.* Hind tibia with 5 or 6 lateral teeth. First and second segments of hind tarsus also with 5 teeth each. Subgenital sternite with long median prominence.

Body mainly dark fuscous to black. Rostrum fuscous on lower side. Tarsi slightly paler than other parts of legs. Fore wing with sparse pale (white) spots: 2 larger at base and apex of stigmal cell, 1 small on anterior 1/3 of costal vein, 1 on anterior 1/4 of costal area, 2 on anterior radial branch (*ScRA*) (1 slightly behind costal spot and 1 halfway to basal stigmal spot), 1 in basal 1/4 of wing on median vein, 1 near the latter spot on anterior cubital vein, and 1 on vein *MA* slightly behind apex of clavus.

Body length 12.7 mm.

Male unknown.

Material. Holotype, ♀: “Madagascar, Tamatave prov., Moramanga env., 13–17.XII.1995, leg. J. Stolarzyk” (ZIN), received from Yu.A. Popov.

A Key to Genera of the Tribe Rhotalini

1 (2). Intermediate carinae of metope pronounced in upper 1/3, separated from lateral carinae by deep groove. Apical callous (area of fusion of carinae) small, depressions of trigones evident .... *Errada* Walker (Fig. 1, *1*, *2*).

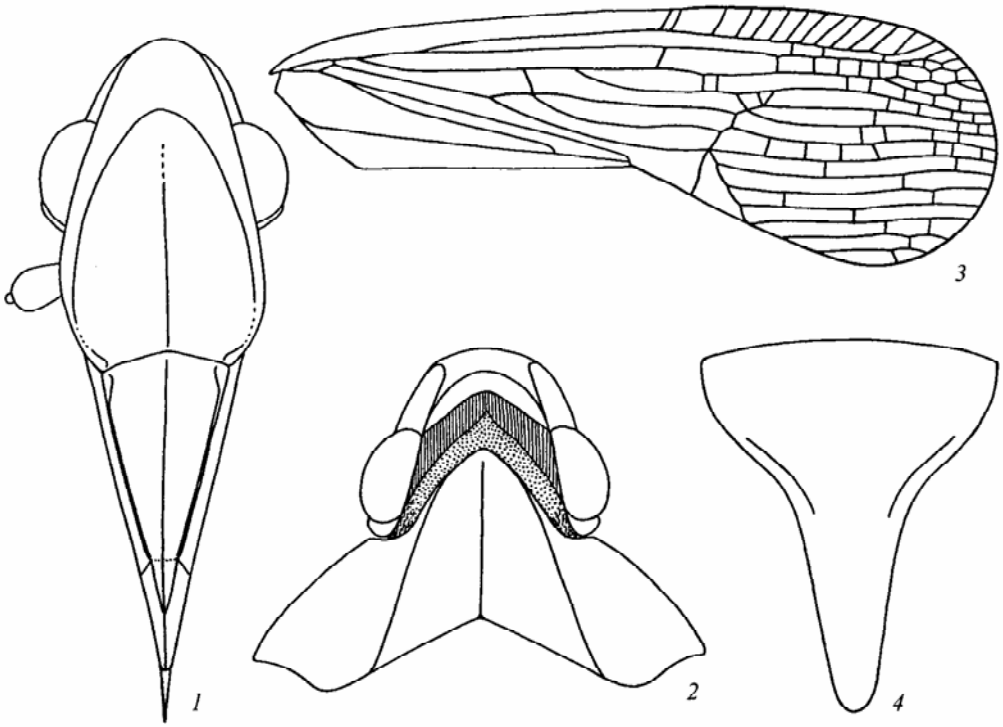

Fig. 3. *Hebrotasa madagascariensis* sp. n.: (*1*) face; (*2*) head and pronotum, dorsal view; (*3*) fore wing (folded); (*4*) subgenital sternite of female.

2 (1). Intermediate carinae of metope not pronounced (fused with lateral ones). Apical callous large. Lateral carina of metope at apex of head widened, but not furcate, not always distinctly separated from metopal area; depression of trigones absent.

3 (4). Lateral carinae of metope narrow nearly along entire length, slightly widened at apex. Median carina of metope sharp along entire length .... *Errotasa* gen. n. (Fig. 1, *3*, *4*).

4 (3). Lateral carinae of metope strongly widened above its middle, fused apically with apical callous. Median carina of metope ill-defined, inconspicuous in upper part.

5 (6). Metopal area sharply separated from elevated and widened carinae. Fore wing without dentiform prominence on anterior branch of *CuA* at the place of its crossing by oblique cross-vein turning in posterior part into achilid vein .... *Hebrotasa* Melichar (Fig. 1, *7*, *8*).

6 (5). Metopal area smoothly, without sharp boundary turning into widened lateral carinae, carinae convex, metopal area concave. Fore wing with dentiform prominence on anterior branch *CuA* at the place of its crossing by oblique cross-vein turning into achilid vein ..... *Rhotala* Walker (*Chiotasa* Melichar) (Fig. 1, *5*, *6*).

In the description of the genus *Hebrotasa* (Melichar, 1914), two variants of spelling occur: *Hebrotasa*, pp. 125, 136, and *Habrotasa*, pp. 135, 143. Metcalf (1954) accepted the spelling *Habrotosa*; however, the original label was written by Melichar's hand as *"Hebrotasa*," therefore, I consider this variant valid. Some other names proposed in the publication mentioned are also written in different ways, e.g., the genus *Chiotasa* is printed as *Chiotosa* on p. 143, and as *Chiotasa* the other three cases.

Tribe **MYCARINI** Emeljanov, 1991

Genus ***KATBERGELLA*** Fennah, 1950

Katbergella bastet Emeljanov, sp. n. (Fig. 4, *1*–*5*)

Description. Female. Coryphe small, narrowed forward, with obtuse-angularly projecting anterior margin and deeply rectangularly emarginate posterior one; surface between carinae deeply depressed; median carina distinct in posterior part and ill-defined in anterior one. Length of coryphe slightly less than its maximum width; coryphe nearly half as wide in anterior part as in posterior one, with posterior emargination occupying nearly half of its total length. Length of

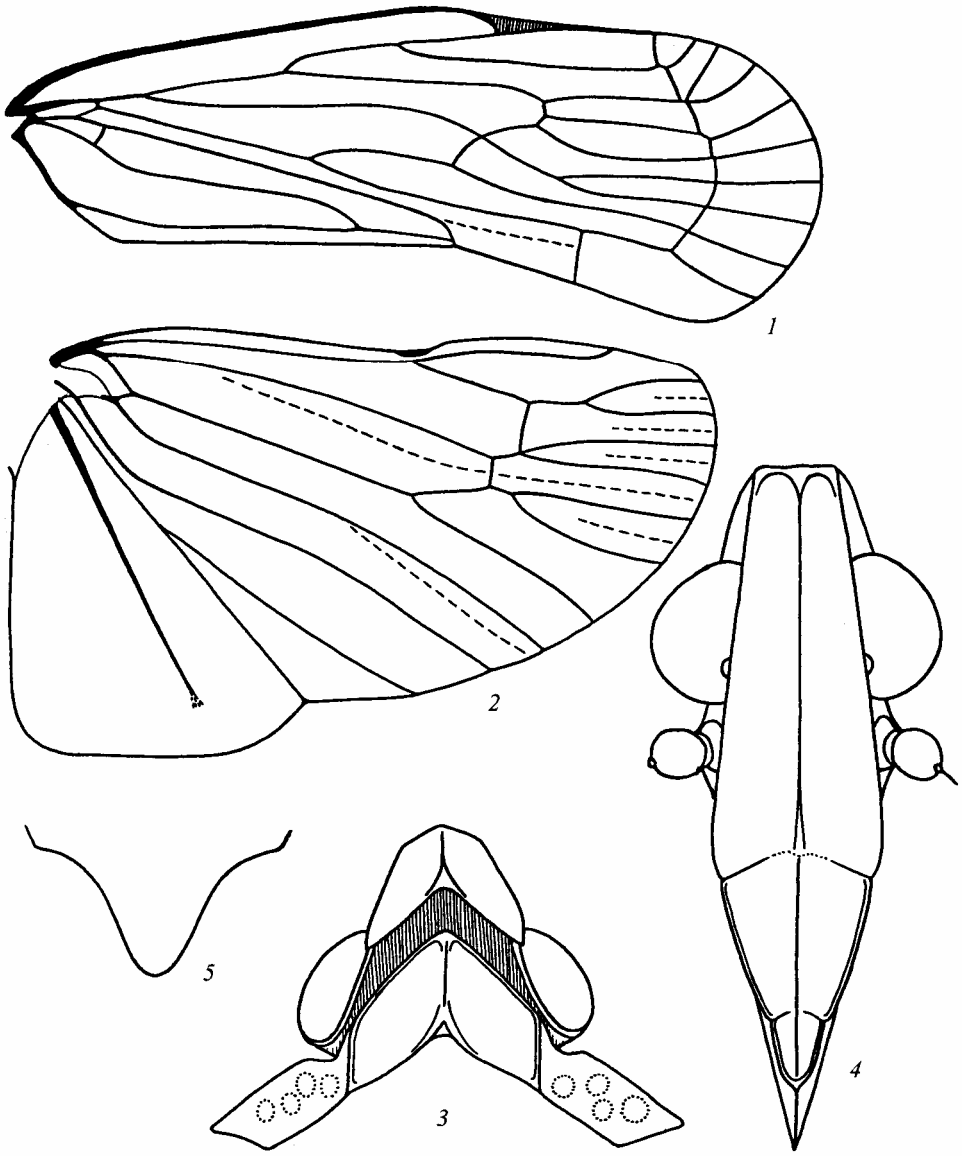

Fig. 4. *Katbergella bastet* sp. n.: (*1*) fore wing; (*2*) hind wing; (*3*) head and pronotum, dorsal view; (*4*) face; (*5*) subgenital sternite of female.

coryphe along midline 0.8 times length of pronotum. Metope elongate, more than 2.5 times as long as wide, about half as wide in lower part than in upper one; its sides straight, convex in lowermost part and slightly converging toward postclypeus. Lower margin with shallow obtuse-angled emargination. Postclypeus nearly half as long as metope; anteclypeus with lateral carinae parabolically fused with each other about its middle. Rostrum long, extending slightly beyond hind coxae, its apical and preapical segments of subequal length. Pronotal disc with sharp, nearly parallel lateral carinae and sharp, almost regularly obtuse-angled anterior margin. Mesonotum transversely rhomboid; lateral carinae slightly arcuately curved outward, parallel in posterior part, slightly approximate in anterior part; distance between them equal to width of pronotal disc. Fore-wing venation differing from that in the type species *K. griseobrunnea* Fenn. in the following characters: (1) common stalk of *RM* behind basal cell shorter than stalk of *R* before first ramifying, (2) *MP* bifurcate, (3) nodal cross-vein *mcu* present, (4) apical cross-vein *icua* forming one line with preceding ones, (5) clavus with cross-vein *cuppcu* in basal part slightly behind arculus. Hind wing typical of the tribe My-

carini. In addition to median fold, apical folds *rm* and *im* present. Vein *RP* bifurcate. Hind tibia with 3 lateral teeth: on knee, behind basal 1/3, and behind basal 2/3. Apex of tibia with 7 teeth (6 + 1); 1st and 2nd segments of hind tarsus with 7 teeth; tooth on 2nd segment, except for marginal ones, with subapical setae.

Body pale fuscous, with vague speckled fuscous pattern. Metope with vague fuscous band in lower part: upper margin of band lying at level of upper margin of antennae and lower, below antennae at distance from them equal to diameter of antenna; this band extending on genae and occupying their upper half below antennae. Lower part of metope, upper part of postclypeus, and adjoining lower half of genae pale, forming obliterate pale band. Supraocular area and lower part of preocular area fuscous, with pale specks, separated by pale upper half of preocular area. Below eye, black spot extending up to carina bordering antennal socket. Dorsal side of pronotum rather pale; humeral areas darker; pectoral areas fuscous, with paler margins. Lateral part of postocular area (in front of humeral area) with dark fuscous bordering extending in the form of irregular bracket along carinae. Scutellum with 1 pair of dark marginal spots outward of posterior ends of lateral carinae. Fore wing with sparse fuscous speckled pattern and pale veins. Costal area with elongate, sharper, dark spot behind basal cell near radial stalk; clavus also with more distinct and larger longitudinal dark spot before middle part of free vein A_1. Body on lower side and legs brownish; legs and thorax with blurry speckled pattern.

Body length about 9.5 mm.

Material. Holotype: ♀, Republic of South Africa, S. Africa (R.E. Turner) (Brit. Mus.), 1926—175, Zululand (Eshore) 1–22.IV.1926 (BMNH).

The genus *Katbergella* Fennah undoubtedly belongs to the tribe Mycarini on the basis of the following characters. (1) anterior margin of pronotal disc sharply angularly projecting forward; (2) lateral carinae of clypeus not reaching apex of anteclypeus and not vanishing, but fused with each other near middle; (3) median vein 4-branched (3-branches in *K. griseobrunnea* Fennah), anterior cubitus bifurcate; (4) *Pcu* and A_1 fused only in distal part of clavus; (5) hind tibia with 3 lateral teeth, including one on knee; (6) median fold on hind wing not ramifying in cubital area.

Tribe ***PLECTODERINI*** Fennah, 1950

Genus ***KOSALYA*** Distant, 1906

Kosalya concludens Emeljanov, sp. n. (Fig. 5, *1–8*)

Description. Habitus similar to that in other congeners. Coryphe transverse, its median carina as distinct as lateral ones. Metope longitudinally convex in upper part, curved onto parietal surface. Boundaries of metope and coryphe in the form of obtuse-angularly curved carina parallel to posterior margin of coryphe. Mesonotum convex, with lateral lobes slanting downwards. Membranule only with 1 row of cross-veins.

Head, thorax, and legs orange; mesonotum with dark spots; fore wing dark fuscous to black. Metope yellowish orange, frequently with reddish vague stripe along median carina. Pronotum without dark spots. Disc of mesonotum (scutum) uniformly black in anterior 1/3, including area of median carina. Lateral margins of pronotum with 2 spots one by one. Posterior 1/3 of scutum also black, except for its posterolateral margins, or only with black transverse spot in anterior half; middle 1/3 pale, with black median carina; posterior part of scutum, when pale, with black median carina. Tegulae orange, with black posterior margin. Abdomen dark fuscous. Hind tibia usually only with 1 lateral tooth before middle.

Male genitalia. Pygophore ring-shaped, with shorter dorsal wall obtuse-angularly concave in posterior part and with 2 approximate, slightly upcurved ventral processes. Narrow sclerotized dorsal band running along posterior margin of pygophore, then deviating from it, and continuously turning into suspensorium (base) of phallobase. Anterior margin of anal tube straight, anterolateral angles articulated with sclerotized band, thus, triangular membranous area formed between band and anal tube. Anal tube flat, roundly trapezoid, emarginate at posterior margin. Penis with very long basal parts of hooks, length of part of hooks protruding forward beyond base of phallobase equal to 3/4 of length of abdomen. Phallobase with 1 pair of slightly different, triangular dorsal lobes (left larger than right one) and elongate, asymmetrical, groove-shaped ventral lobe projecting backward and bearing recurrent tooth (left tooth larger than right one) at each side dorsolateral margin; lower side of phallobase with longitudinal row of teeth; bottom of groove of phallobase with 2 longitudinal leaf-shaped lobes delimiting medially hooks of penis. Apices of hooks of penis finely serrate, different: left tooth more or less simply

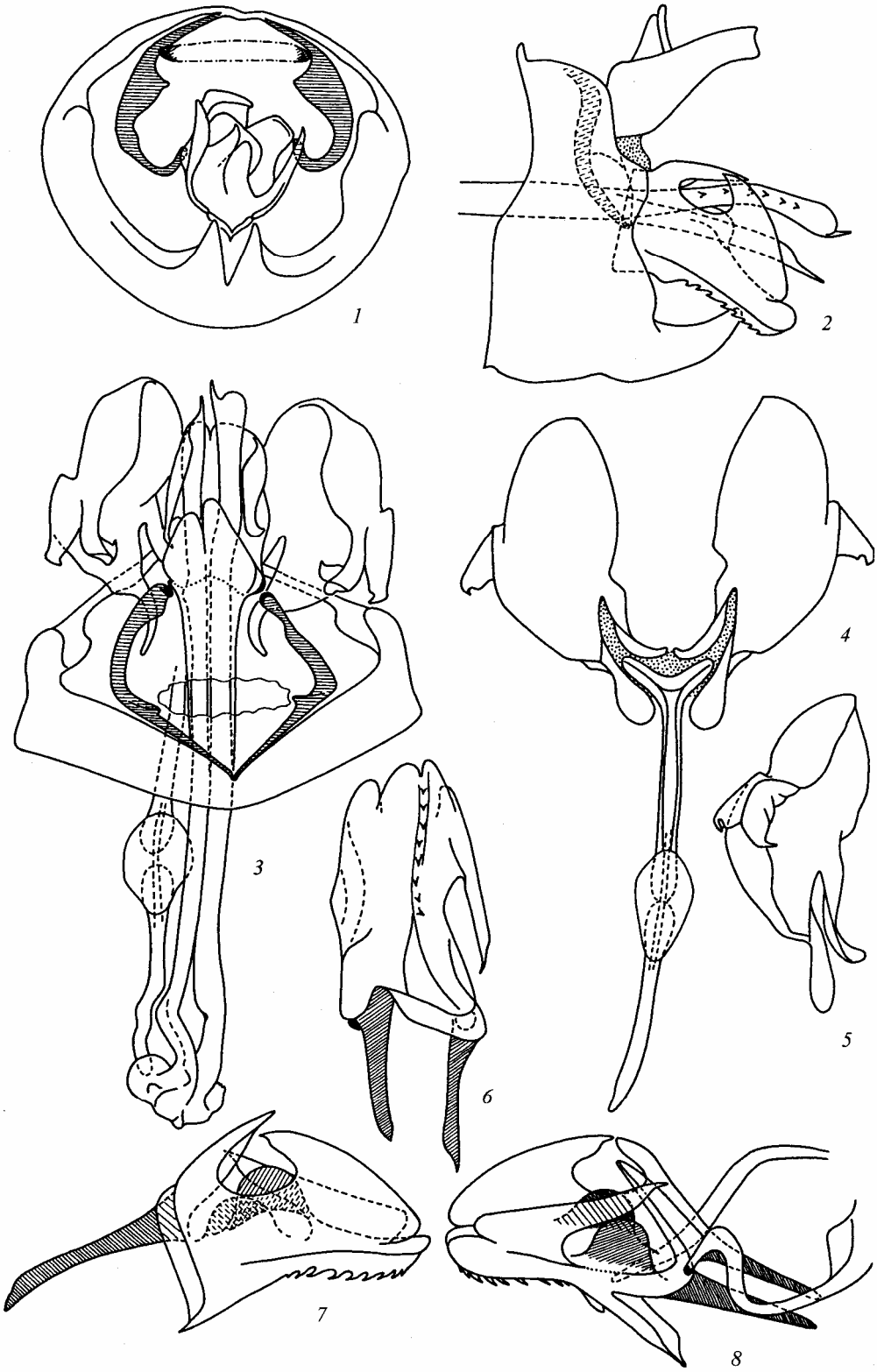

Fig. 5. *Kosalya concludens* sp. n., male genitalia: (*1*) pygophore and phallotheca, posterior view; (*2*) genitalia, left-side view (styli removed); (*3*) genitalia, dorsal view (anal tube removed); (*4*) styli and endoconnective, ventral view; (*5*) right stylus, dorsal view; (*6–8*) theca [(*6*), ventral view; (*7*) left-side view; (*8*) right-side view (articulation with chords of pygophore shown).

pointed; right one swollen before apex, and its apex arising from lateral wall of swelling. Endoconnective, as well as hooks of penis, long, with joint-shaped structure in middle part. Styli irregularly spoon-shaped, with bifurcate upper tooth; bases of styli with additional median apophyses extending toward each other behind transverse beam of endoconnective.

This species is closely related to *K. dilatata* Ch.Y. Wils. and differs from it in the absence of a tooth on the left side of the phallotheca.

Body length 6.4–7.1 mm in male, 7.2–8.6 mm in female.

Material. Holotype: ♂, Suputinskii Nature Reserve, 27.VIII.1966 (Anufriev), from *Phellodendron amurense*. Paratypes: 10 ♂, 17 ♀, as holotype; 1 ♀, Primorskii Terr., Evgen'evka, Odarka River, 28.VII.1911 (Emeljanov); 1 ♀, Suchan, Sitsa River source, 26–27.VIII.1928 (Kurentsov); 1 ♀, 30 km NE Spassk, 27.VIII.1982 (Belokobylskij); 2 ♂, 4 ♀, Vinogradovka, 3.VI, 29.VII–9.VIII.1929 (Kiritshenko); 1 ♂, 1 ♀, Novovladimirov[ka] (Cherskii & Berger); 1 ♀, 25 km E Varfolomeevka, 17.VIII.1963 (Falkovitsh) (all in ZIN).

Tribe **ACHILINI** Stål, 1866

Genus ***OUWEA*** Distant, 1907

= *Spendon* Jacobi, 1928.

Differences between the Genera Ouwea Distant and Catonidia Uhler

1 (2). Veins of stigmal area recurrent. Stalk of *RM* only slightly shorter than basal cell. *R* ramifying near base opposite middle of clavus. Vein RA_1, bordering stigmal cell basally, not developed; *rm* shifted from nodal level toward apex, joining to *M* after its 2nd ramifying, without additional cross-veins between it and subapical branches of *rm*. Median vein divided into 5 branches: 3 arising from *MA* and 2, from *MP*. Veins CuA_1 and CuA_2 not ramifying behind subapical cell. *CuA* ramifying much more distally than *R*. Claval veins fused in distal 1/3 of commissural suture. Lateral ocelli situated behind the tangent "margin of eye–margin of antennal socket." Face (metope) and temples (preocular areas) narrow. Coryphe rather narrow, about 1.5 times as wide as long (along sides), with deeply emarginate posterior margin ..... *Catonidia* Uhler.

2 (1). Veins of stigmal area pointing obliquely forward and toward apex. Stalk of *RM* about half as long as basal cell. *R* ramifying halfway to stigmal cell. Vein RA_1, bordering basally stigmal cell, well developed, pointing obliquely forward. Vein *rm* situated at nodal level, immediately behind ramifying of *M*; additional cross-veins present between nodal and subapical *rm*. Median vein abundantly ramifying; posterior branch ramifying more abundantly than anterior one. Veins arising from cell CuA_1 forming 3 or 4 branches behind subapical cross-vein; 2 middle branches quasi arising from subapical cross-vein. *CuA* and *R* ramifying at one level. Claval veins fused opposite middle of commissural margin of clavus. Lateral ocelli lying in front of the tangent "margin of eye–margin of antennal socket." Face (metope) wide, temples (preocular areas) narrow. Coryphe wide and short, 3 times as wide as long, with straight posterior margin .... *Ouwea* Distant.

Genus ***PARABUNDA*** Emeljanov gen. n.

Type species *Parabunda tasmanica* sp. n.

Description. Head small, wider than long in dorsal view. Coryphe concave, nearly twice as wide along posterior margin as long; anterior margin gently prominent, posterior one so emarginate; lateral margins slightly converging forward; all bordering carinae, including occipital one, sharp. Median carina absent, but anterior carina with tubercle in middle. Eye slightly narrower than vertex. Metope elongate, its length twice exceeding maximum width; its sides straight and only slightly diverging from coryphe to level of antennae, convex there, and then slightly converging downwards. Upper margin straight, transverse; lower one rectangularly emarginate. Carinae of metope sharp; upper carinae (separating metope from coryphe) widened and flattened toward lateral margins, outlining rudimentary trigones. Postclypeus with 3 sharp carinae, about half as long along lateral margin as metope. Lateral carinae of postclypeus extending onto anteclypeus and vanishing at its middle near median carina, not fused with it. In lateral view, metope and postclypeus forming gently convex common arc, anteclypeus curved slightly sharper. Antennae small, simple. Lateral ocelli large, distance between them and eye subequal to half diameter of ocellus. Rostrum reaching apex of hind coxae (up to trochanter condyles), apical and preapical segments of subequal

length. Pronotum wider than long, much wider than head, projecting at sides nearly for transverse diameter of eyes, slightly longer medially than vertex. Disc narrowly truncate at anterior margin; its lateral margins diverging at acute (nearly right) angle in anterior part, then smoothly curving, and running nearly in parallel to posterior margin of pronotum up to lateral carina which serving as their direct continuation. Median carina of disc sharp, nearly reaching anterior margin of disc in anterior part. Posterior margin of pronotum obtuse-angled along most part (between tegulae), with straight component parts. Posterolateral carina of disc absent, paradiscal areas subdivided into depressed cells by ill-defined ridges; 4 cells present at each side (they undoubtedly corresponding to larval sensory pits); collateral carinae designated by 2 humeral pits; 1 more pit (pectoral) lying below humeral pits at posterior margin of pronotum. Mesonotum rhomboid, slightly wider than long, with 3 subparallel carinae. Lateral carinae ill-defined, but surface between them (disc) shagreened, whereas lateral areas smooth. Fore wing rather slender, membranule occupying about half length of wing, costal and claval margins subparallel, costal margin gently prominent in basal 1/3. Costal area slightly wider than succeeding ones. Common stalk of *RM* behind arculus nearly as long as basal cell, *R* first ramifying closer to stigma than to *RM* fork. Costal vein curving before fusion with *ScRA* deep into wing; therefore, transversely striate margin of wing (peripheral vein) widened before pterostigma. Pterostigma with rather sparse reticulation of secondary veins. Median vein arcuately arising from base (from *RM* fork), approximating to *CuA*, and then departing from it and approximating to *R* to nearly the same extent; *M* first ramifying on nodal line; both branches ramifying again: posterior one earlier, and anterior one later. Vein *CuA* ramifying opposite distal 1/4 of clavus, posterior branch of *CuA* ramifying before apex. Nodal cross-veins *rm* and *mcu* present, middle part of membrane without cross-veins; a series of cross-veins extending near peripheral margin from pterostigma to posterior branch of median vein; these cross-veins cutting off short apical cells becoming slightly longer backward; cross-veins stepwise running forward behind vein M_4; *icu* situated at place of origin of CuA_2. Achilid vein lying in middle of posterior margin of membranule. Apex of hind tibia with 9 or 10 teeth; basal row of 2 + 5 or 2 + 6 teeth forming smooth arc; 2 or 3 teeth arranged in second row. First segment of hind tarsus with 8 or 9 teeth all, except for 1 outermost and 2 innermost ones, bearing subapical platellae. Second segment with 9–11 teeth; platellae present on all teeth, except for marginal ones.

Parabunda tasmanica Emeljanov, sp. n.
(Figs. 6, *1*, *2*; 7, *1*)

Description. Body mostly fuscous; parts of body dark fuscous with pale specks, or pale with large dark spots. Carinae of coryphe lightened, except for posterior one; surface dark fuscous, with irregular pale spot in middle. Metope dark fuscous to black, with dense round pale specks; carinae lightened; lateral carinae with dark line along ridge. Supraocular area pale, preocular area and genae darkened, lower margin of genae pale. Clypeus and lora fuscous with pale spots, median carina of clypeus widely lightened; postclypeus with 1 pair of transverse spots in upper part and 1 pair of longitudinal spots in middle part. Upper side of pronotum, including carinae, with dark spots mainly covered with wide indistinct pits developed at places of larval sensory pits. Median carina of disc and carina of posterior margin of pronotum near disc with dark fuscous bordering. Paranotal lobes of pronotum with large dark spot distant from all margins, except for anterior one; around this spots, peripheral area with obliterated dark speckles; margin of paranotal lobes narrowly lightened. Anterior 1/4 of mesonotal disc fuscous, rest of its surface nearly black; fuscous and black areas separated by narrow white band in the form of a pair of backward-oriented brackets; lateral margins of disc with 1 pair of white spots behind lateral carinae; apex of scutum also white. Lateral lobes of mesonotum fuscous, with indistinct paler and darker areas; 2 more distinct spots lying near tegula and 1, in anterior part near margin of disc. Tegulae pale fuscous, with vague fuscous spot on lower side. Fore wing fuscous to dark fuscous, with irregular, frequently adjoining pale specks. Middle part of wing darker; due to absence of specks, these darker areas forming very indistinct band doubled laterally. Vein on corium and clavus slightly paler than background, nearly white on membranule. Lower side of thorax irregularly fuscous. Abdomen on lower side dark fuscous to black, with paler posterior margins of sternites. Fore and middle femora fuscous, with vague pale band in middle part; tibiae with pale band in second 1/4 and pale apices; tarsi fuscous. Hind legs rather uniformly fuscous.

Male genitalia. Pygophore with deep dorsal emargination slightly widened backward and delimited

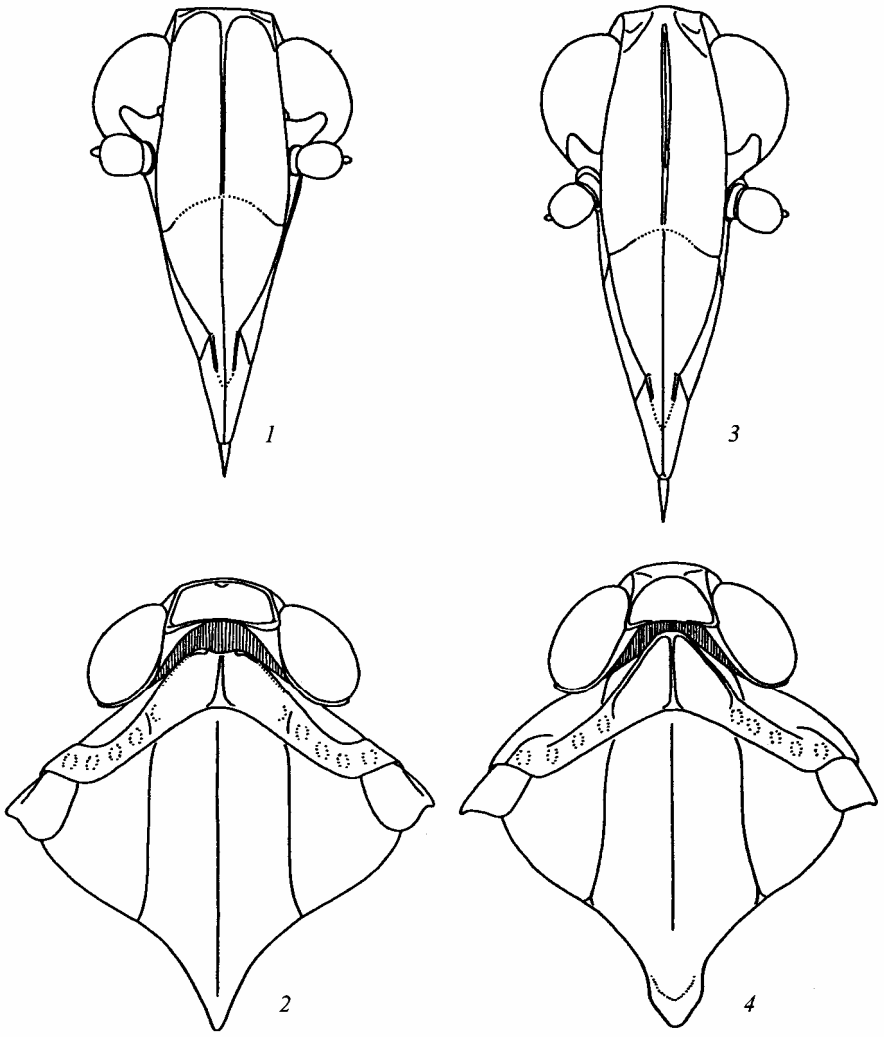

Fig. 6. Face (*1*, *3*) and anterior part of body, dorsal view (*2*, *4*): (*1*, *2*) *Parabunda tasmanica* sp. n.; (*3*, *4*) *Dipsiathus obscurifrons* sp. n.

sharply projecting posterior angles. Anal tube oblong-oval; its basal half situated between lateral margins of dorsal emargination. Pygophore with very large ventral prominence parabolically projecting in middle and delimited at sides by 1 pair of small teeth. Styli more strongly deepened into pygophore, their dorsal processes covered dorsally by wall of pygophore at sides of dorsal emargination. Base of theca of penis fastened by 1 pair of apophyses to lateral margins of dorsal emargination of pygophore, closer to its orifice. Lower wall and ventral lobes continuing wall with arcuately upcurved apex deeply incised medially. Two pairs of dorsal lobes present: inner lobes in the form of tapered processes weakly curved in parallel to lower wall, outer ones in the form of rounded plates with tapered prominence at caudoventral margin. Hooks of penis with strong upcurved right-angled apices inserted in groove of lower wall of theca to form lobes continuing it.

Body length 8.5 mm in male, 9 mm in female.

Material. Holotype: ♂, Tasmania, Huon R. Tas-[mania]. 24.XII.1974. F. McDonald. (NSWA). Paratype: ♀, Tasmania, Lake St. Clair, Tasm. 13.I.1937. G. & C. Davis (AMSA).

Genus ***DIPSIATHUS*** Emeljanov, gen. n.

Type species *Dipsiathus obscurifrons*, sp. n.

Description. Head small, significantly narrower than pronotum; coryphe slightly wider than long; upper transitive part of metope visible in dorsal view before margin of coryphe. Anterior margin of coryphe rather strongly convex, subapical in relation to con-

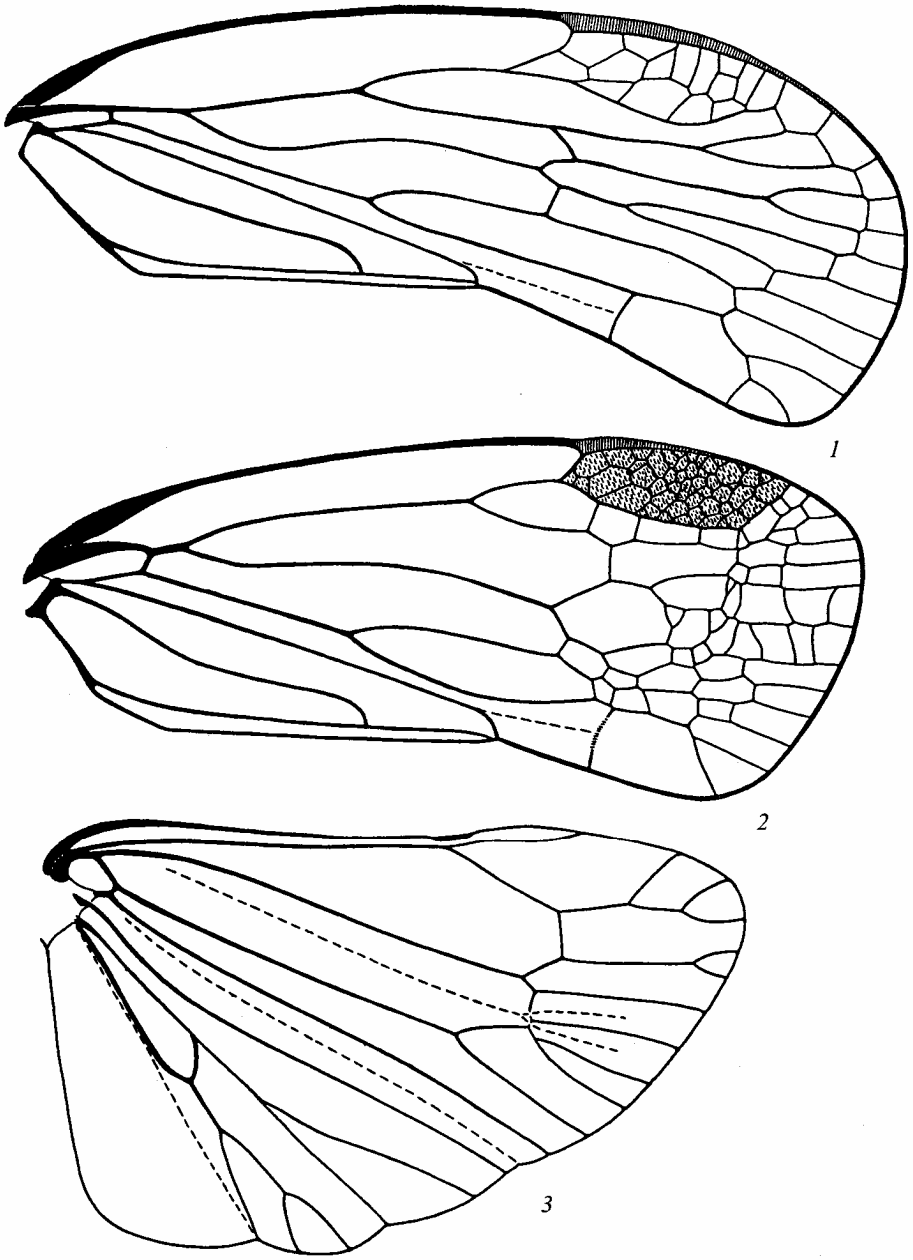

Fig. 7. Wings: (*1*) *Parabunda tasmanica* sp. n., fore wing; (*2*, *3*) *Dipsiathus obscurifrons* sp. n.: [(*2*) fore wing; (*3*) hind wing].

cave posterior margin; lateral margins of coryphe distinctly diverging backward; anterior and lateral margins smoothly turning into each other. All marginal carinae of coryphe sharp, surface of coryphe rather deeply depressed, median carina absent. Eye about as wide as vertex. Metope elongate; its lateral margins and margins of trigones and postclypeus forming uniform flat arc; metope widened from coryphe to level of antennae, then narrowed downwards; median carina of metope and postclypeus sharp, as well as lateral carinae; surface between carinae in the form of shallow grooves. Upper margin of metope narrow, delimited at sides by elongate trigones; this part of head convex, with smoothened carinae. Clypeus running into metope at angle with slightly attenuate apex (halves of lower margin of metope prominent). Median ocellus absent. Lateral ocelli large, closely approximating to eye. Length of metope 2.5–3.0 times its maximum width. Postclypeus more than half as long along outer margin as metope. Lateral carinae of postclypeus extending onto anteclypeus and vanishing at its middle near median carina, not fused with it. In lateral view,

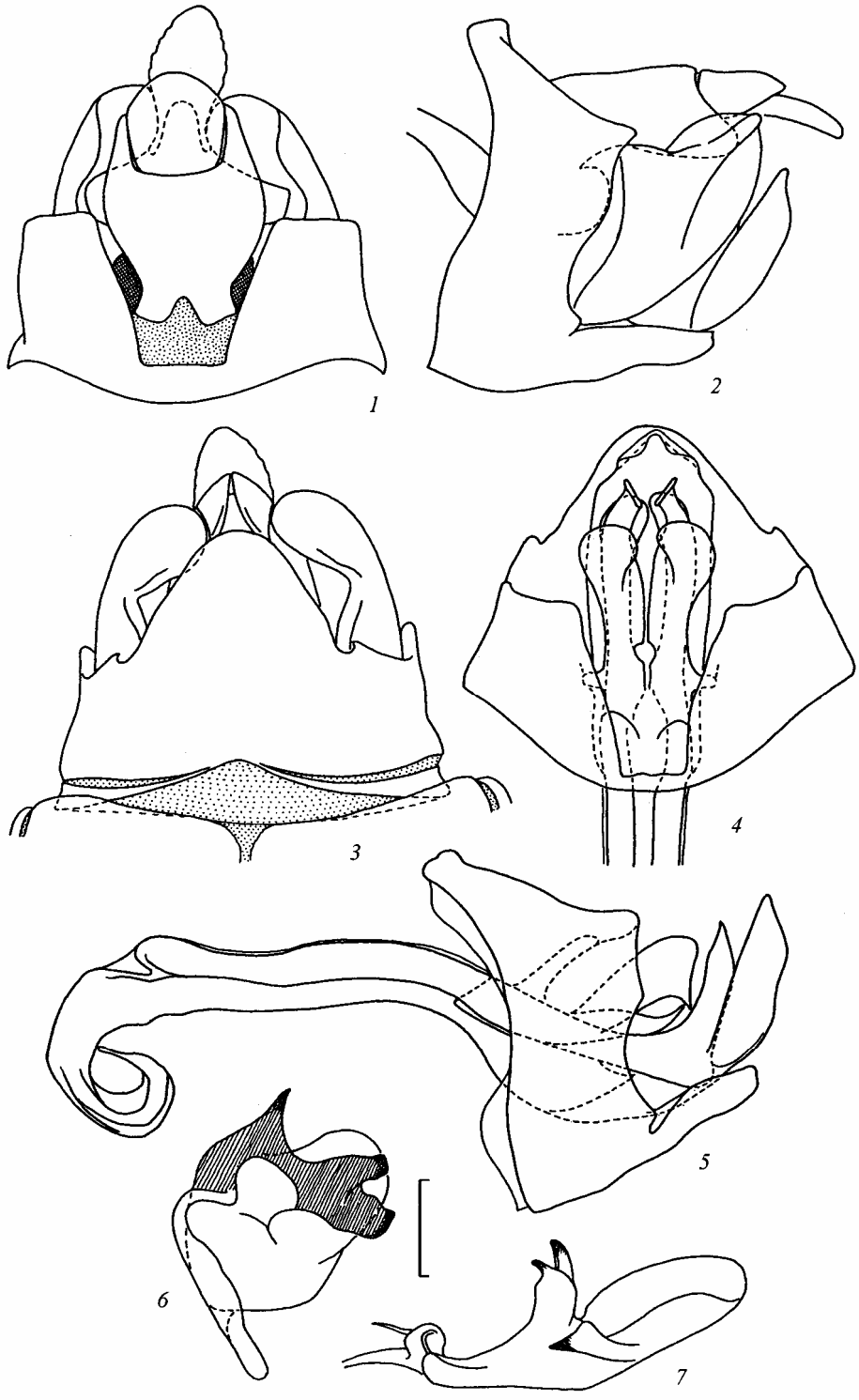

Fig. 8. *Parabunda tasmanica* sp. n., male: (*1–3*) genitalia, dorsal, lateral (left-side), and ventral view, respectively; (*4*, *5*) pygophore and penis, dorsal and lateral (left-side) view, respectively; (*6, 7*) stylus, posterior and dorsal view.

metope and postclypeus forming flat arc sharply curved only in upper part at boundary with coryphe. Antennae small, simple. Rostrum long, length of its part projecting beyond apices of hind coxae equal to 1/3 of length of apical segment; apical segment slightly shorter than preapical one. Pronotum much wider than long, much wider than head, projecting at sides nearly for transverse diameter of eye, about twice as long medially as coryphe. Pronotal disc subtriangular; its lateral margins converging forward at acute (nearly right) angle, weakly prominent, then more sharply curving toward each other and converging at anterior margin, vanishing in posterior part, not reaching posterior margin. Median carina of disc sharp. Posterior margin of pronotum mostly (between tegulae) obtuse-angled, with straight component parts. Posterolateral and postocular carina absent. Lateral parts of upper side of pronotum with 4 depressions at each side, corresponding to larval sensory pits [3 outer pits—paradiscal and 4th (inner) posterior one—discal, according to usual homology of pits in Achilidae]. Actual lateral margin of pronotum formed by collateral carina; lateral carina shifted onto dorsal surface and shortened in anterior part. Humeral area (between lateral and collateral carinae) with 2 depressions. Mesonotum slightly wider than long; its anterior margin weakly obtuse-angularly projecting; posterior margin obtuse-angled, nearly straight; apex slightly attenuate. Mesonotal carinae sharp, lateral ones slightly diverging backward. Fore wing moderately slender; membranule occupying about 2/3 of total length of wing; costal and claval commissural margins distinctly diverging toward wing apex. Cells of wing glassy, hyaline, except for areas with dense reddish fuscous pattern. Costal cell uniformly darkened and covered with fine reticulation of secondary veins. Apex of membranule obliquely transversely truncate, with rounded anterior and posterior angles. Costal margin, except for convex basal part, straight. Costal area not wider than radial and median ones. Common stalk of *RM* behind arculus about as long as basal cell, first ramifying opposite apical 1/4 of costal area. Costal vein slightly curving deep into wing before fusion with *ScRA*; therefore, transversely striate margin of wing (peripheral vein) widened before pterostigma and narrowed in the form of elongate wedge toward apex of pterostigma, reaching there usual size. *RP* bifurcate. Median vein smoothly deviating from radius, running at equal distance from *R* and *CuA*, first ramifying on nodal line; then both its branches ramifying in middle part of membrane. Anterior cubitus ramifying opposite posterior 1/3 of clavus; anterocubital area lanceolate, narrowed before nodal line, as though being replaced there by fork of median vein. Claval veins fused in posterior 1/4 of clavus. All nodal cross-veins present (*ir*, *rm*, *mcu*, *icua*); in addition, middle part of membranule with row of 2, 3, or 4 cross-veins and with separate veins of subapical row. Hind wing with 3-branched *RP*, bifurcate *MA*, and 3- or 4-branched *CuA*. Analjugal lobe usually with ill-defined blind branches of anal veins, vein A_2 3-branched. Anterior branch of A_1 arising from fold behind posterior branch. System of folds distinct (Fig. 7, *3*). Apex of hind tibia with 11 or 12 teeth arranged in the form of a dovetail; first row with 2 + 7, and second row with 2 or 3 teeth. First and second segments of hind tarsus with 8–9 (in *D. obscurifrons* sp. n.) or about 13 (in *D. pallidifrons* sp. n.) teeth; some inner teeth on 1st segment without subapical setae, marginal teeth always without setae; 2nd segment with subapical setae on all teeth, except for marginal ones.

Dipsiathus obscurifrons Emeljanov, sp. n.
(Fig. 6, *3*, *4*; 7, *2*, *3*; 9, *1*–*5*)

Description. Body mostly fuscous on upper side and pale fuscous on lower side. Coryphe fuscous, with pale longitudinal stripe at place of median carina. Face (including anteclypeus) greenish yellow between carinae, with rather wide dark fuscous stripe running along median carina and having vague lateral margins; pale part of anteclypeus without stripe; metope with darker stripe and frequently with slightly lightened ridge of carina. Trigones occasionally with indistinct, fragmentary red bordering. Preocular area and genae around ocelli and between antennae and eyes dark fuscous, antennae pale; genae below antennae and also upper part of lora pale; pale part of lora frequently reddish; lower part of lora darkened beginning with the line "dorsoventral angle–middle of anterior margin;" anteclypeus also darkened everywhere outside triangle delimited by lateral carinae. Rostrum pale, weakly darkened toward apex. Pronotum fuscous on upper side, its lateral parts with vague pale speckles on elevations between depressions. Pectoral area fuscous to yellowish fuscous in upper part and pale, whitish, with indistinct touch of red pigment in lower part. Mesonotum fuscous, with vague paler spots in places; apex of scutellum pale to white. Tegulae fuscous, slightly lightened on lower side. Fore wing with fuscous veins and hyaline cells bearing spotty fuscous pattern. Costal vein with alternating 6 yellowish fuscous and 6 whitish areas, darkened at base, pale in

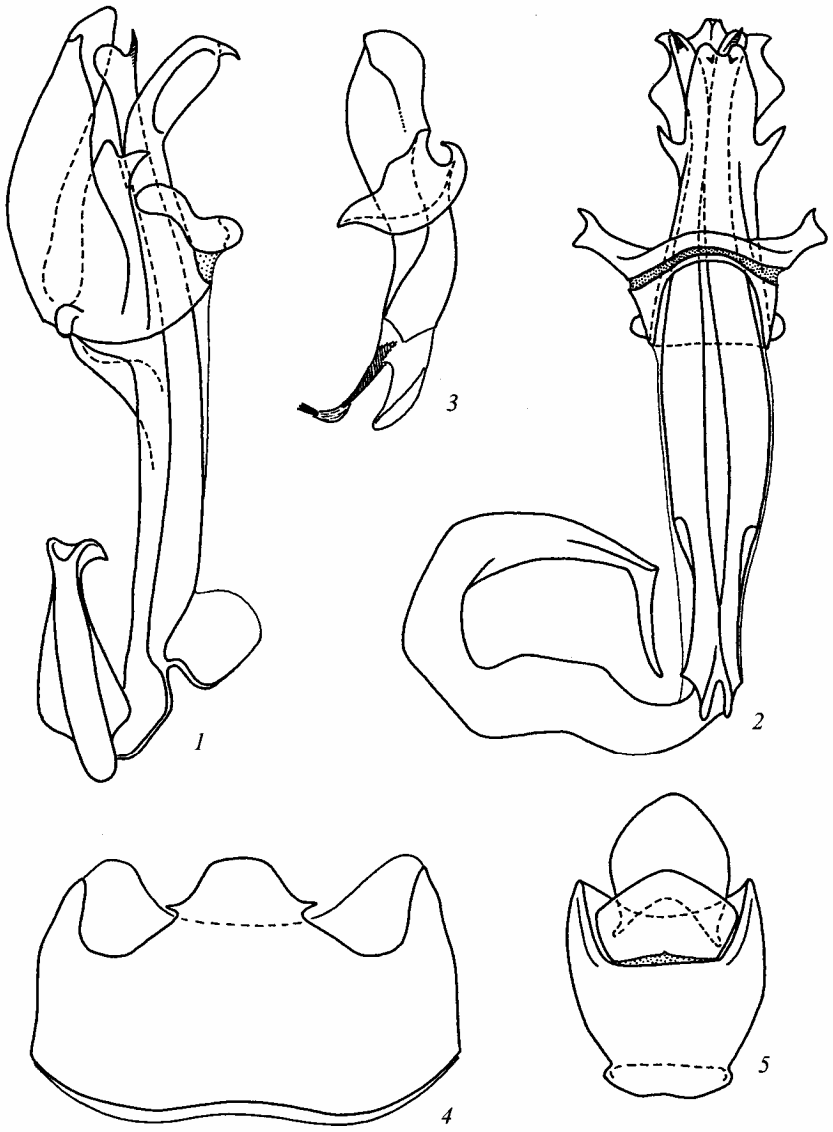

Fig. 9. *Dipsiathus obscurifrons*, sp. n., male genitalia: (*1*) penis, right-side view; (*2*) penis, dorsal view; (*3*) stylus, dorsal view; (*4*) pygophore, ventral view; (*5*) anal tube, dorsal view.

apical area before pterostigma. Pterostigma dark fuscous, with reddish venation. Subcostaradial stalk with dark spots opposite 3rd, 4th, and 5th dark areas of costa; these spots extending onto radial area, more strongly extending on costal area, frequently narrowly adjoining similar spots near costal vein; parts of spots lying on costal area near vein with rounded holes, quasi perforated. Other veins also with small dark areas, which in darker individuals, occasionally connected by transverse straight and oblique bands; oblique band frequently running from middle of sutural margin of clavus to fork of radial stalk (distal spot of radial stalk lying there), toward base of pterostigma; one more band originating from the same distal spot, running straightly crosswise; area between these 2 bands rather frequently also darkened. One more band frequently running obliquely across middle of membranule through series of cross-veins in parallel to posterior margin of wing. This band slightly approximating to wing apex near anterior margin, always separated from dark area of pterostigma by interradial area. Margins of cells along apical margin of wing separately darkened, grayish. Hind wing grayish fuscous at apex. Dark area at anterior margin originating from frenulum as a narrow stripe, then widened, turning in parallel to margin, running through forks *RP* and *MA* as far as node of folds *MP*, and then, sharply narrowing, reaching anojugal fold. Fore and middle

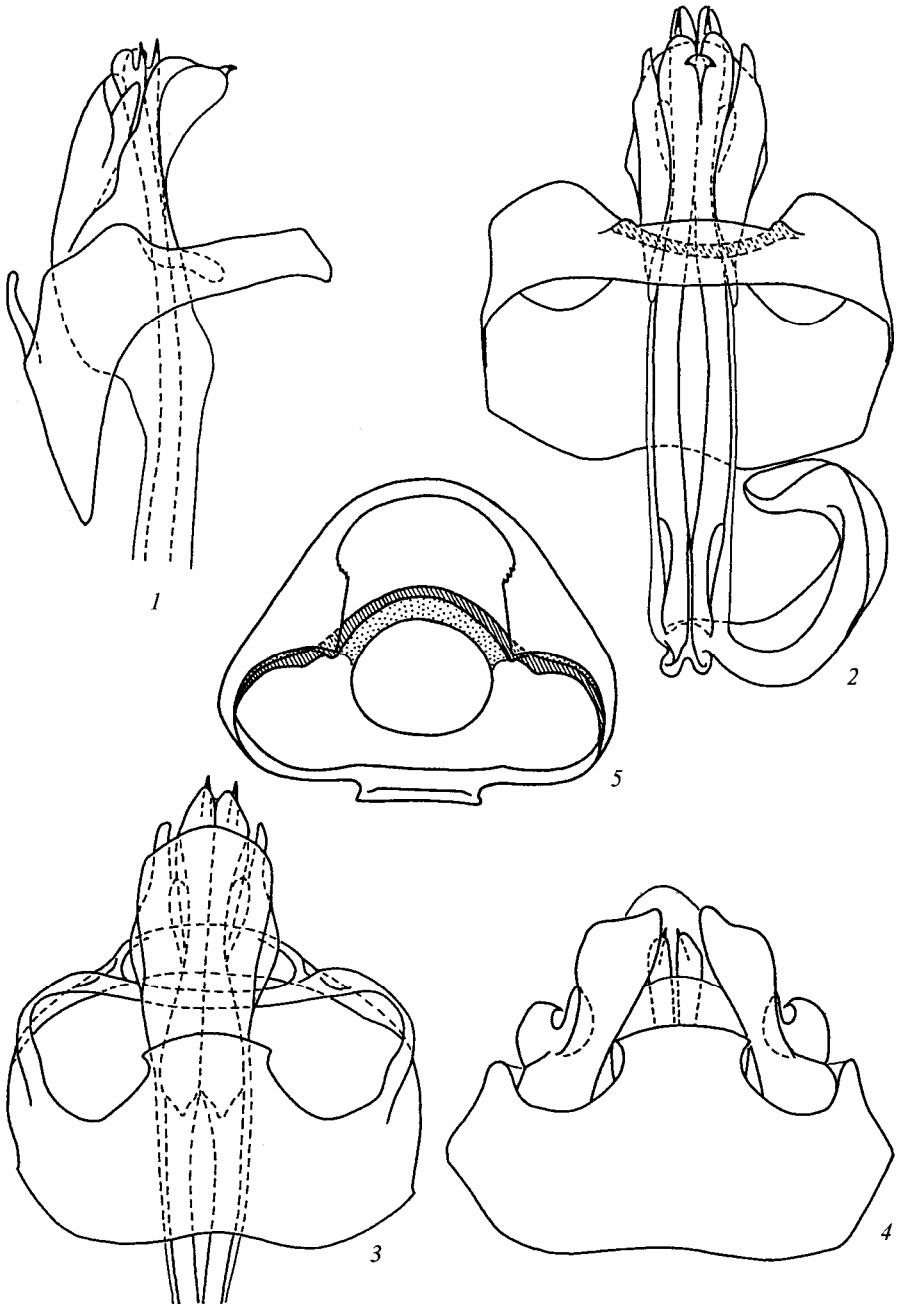

Fig. 10. *Dipsiathus pallidifrons*, sp. n., male genitalia: (*1–3*) pygophore and penis [(*1*) right-side view; (*2*), dorsal view; (*3*), ventral view]; (*4*) genitalia, ventral view; (*5*) pygophore, posterior view.

legs with pale band in apical 1/3; tibiae with alternating dark and pale areas: base of tibia dark, next area pale and as small as basal one, then larger dark area extending nearly as far as middle of tibia, and subapical dark area (nearly as long as preceding dark area) leaving short apical part pale; tarsi darkened. Hind femur grayish fuscous, with vague pale band; tibia also brownish gray before apex, with pale lateral tooth and apex; tarsus fuscous. Abdomen pale on lower side, genitalia strongly darkened. Mesothorax fuscous, with paler carinae and margins of sclerites; metathorax and hind coxa fuscous.

Male genitalia. Pygophore with short dorsal wall and wider ventral wall projecting forward. Lateral walls with obtuse posterior prominences. Dorsal depression destined for anal tube shallow and wide, its posterior margins connected under tube by sclerotized

chord. Lower margin forming large cuneiform posterior prominence with rounded apex and 1 pair of teeth at middle of lateral margins. Anal tube short and wide, only slightly narrowed to posterior margin. Theca in the form of narrow membrane hanging at lower margin of chord. Ventral groove-shaped wall of theca (ventral lobe) with median incision at apex, its lateral margins with small subapical lobes. Shorter lateral lobes above ventral wall (lobe) also bearing subapical processes pointing sideward. Dorsal wall (lobe) of theca curved obliquely upward and backward, with two-toothed apex. Hooks of penis straight, with slightly swollen rounded apices and dorsal subapical tooth.

Body length 8.0–8.5 mm in male, 8.8–9.5 mm in female.

Material. Australia. Holotype: ♂, N. S. W. Mt. Kaputar Nat. Pk. c 1370 m 14.I.1978, G. Daniels (AMSA), A. C. T. Paratypes: 1 ♀, Tidbinbilla Nature Reserve, 35 km SW Canberra, A. Emeljanov (ZIN); 1 ♀, [Ku]rrogong N. S. W. X[19]31, Dr. K.K. Spence (AMSA) Tasmania: 1 ♂, Pieman Bridge, Tas., 7.I.1937. G. & C. Davis (AMSA). 1 ♂, N. S. W. Wilson's Valley, Snowy Mts., 10.II.1979, D.K. McAlpine & B.J. Day (AMSA). 1 ♀, Narara. 5.IX.1924; K55574 (AMSA). 1 ♀, N. S. W. Nepean River, 17.X.1920, A. Musgrave (AMSA), K4332? genus same as K45–367 Id. by China B. M.>. 1 ♀, N. S. W. Eastern foothills. Clyde Mt. 400 ft, 15.VIII.1967, Z. Liepa; coll. as nymphs on Bracket fungus (ANIC). 1 ♂, Vic. Glenburn, 8.I.1957, A. N.//Ex J. W. Evans, collection donated 1986 (NSWA); 1 ♂, N. S. W. nr. Seaman's Hut, Snowy Mts. 29.XI.1959, D.F. Waterhouse (ANIC); 1 ♀, Minnamurra Falls, 11.XII.1973, W.J. Robinson (ANIC). 1 ♀, N. S. W. Bolairo, 3.XII.1961, F.F. Riek (ANIC). 1 ♂, N. S. W. Ulong. East Dorrigo, W. Heron (AMSA) [without head]. Tasmania: 1 ♂, N Tasmania, Mole Creek, Trowunha Wildlife Park, 11.XI.1999 (V. Zherikhin) (ZIN).

Dipsiathus pallidifrons Emeljanov, sp. n.
(Fig. 10, *1*–*5*)

Description. Similar to the preceding species, but differing in many details of coloration. Head more uniformly colored, occasionally pale, including coryphe, or fuscous; coryphe occasionally dark fuscous, darker than face. Median carina on face slightly darker than rest of surface, lateral parts of postclypeus usually paler. Upper part of pectoral area of pronotum slightly swollen and strongly smoothened below collateral carina, black, shining; humeral area and upper side of pronotum remaining fuscous; lower part of pectoral area white. Tegulae also mainly black and shining. Pattern of wings also similar to that in the preceding species; spots on costal area along radial stalk without obvious pale hole. Body slightly darker on lower side, with dark band extending from darkened sides of lora and anteclypeus through fore coxae and mesothorax; upper part of mesopleura remaining pale. Legs colored as those in the preceding species, but pale elements less distinct, obliterated. Middle femur paler than fore one, almost uniformly pale fuscous.

Male genitalia. Pygophore with short dorsal wall and wider ventral one projecting forward; lateral walls with obtuse prominence. Dorsal emargination destined for anal tube shallow and wide, its posterior margins connected by sclerotized chord under tube. Lower margin forming trapezoid prominence with posterolateral angles attenuate sideward, and posterior margin gently prominent. Anal tube short and wide, only slightly narrowed toward posterior margin. Theca connected with adjoining chord by narrow membrane, similarly to that in *D. obscurifrons* sp. n. In contrast to *D. obscurifrons* sp. n., ventral lobe of theca slightly shorter than dorsal one, without apical incision; lateral lobes without lateral process; and dorsal lobe more strongly upcurved.

Body length 5.3–6.0 mm in male, 6.7–7.0 mm in female.

Material. Australia. Holotype: ♂, N. S. W. Pearl Beach near Woy Woy, 4.IX.1969. F. McDonald (NSWA). Paratypes: 1 ♂, N. S. W. Lismore district, 30.VIII.1978, E. W. Dicker (NSWA); 1 ♀, N. S. W. Kurrawonga Falls Tk. / 150: 10E, 30 : 21S, 620–890 m, Mt. Kaputar Nat. Pk., 7.XII.1987, G.R. Brown (NSWA); 1 ♀, N. S. W. Green Point, Bescroft Peninsula, 30 km S. E. of Nowra, 13–14.IX.1986, G.R. Brown and H. M. Holmes (NSWA).

Genus ***EPIONA*** Emeljanov, gen. n.

Type species *Epiona kirejtshuki* sp. n.

Description. Vertex (coryphe) small, as wide as eye. Anterior margin gently obtuse-angularly prominent, with slightly attenuate apex; lateral carinae straight, diverging backward; posterior margin with deep or shallower obtuse-angled emargination; anterior margin of emargination reaching level of anterior margins of eyes. Anterior and lateral margins of

vertex carinate, sharp, high; posterior margin in the form of low carina; median carina absent; margin also arcuately lowered to repeat shape of depression, not closing posteriorly emargination of vertex, in contrast to anterior and lateral margins. Metope gently convex in lateral view, fused with coryphe at acute (nearly right) angle; twice as wide in lower part than in upper part near coryphe; sides straight and diverging from apex to level of antennae, then convex and subparallel, and weakly converging in lower part; length of metope about 3 times its maximum width. Marginal and median longitudinal carinae of metope sharp, intercarinal lobes groove-shaped. Boundary with clypeus weakly convex, nearly straight, hardly visible in middle part; median ocellus absent. Postclypeus with sharp median and lateral carinae; lateral carinae nearly straight, sharply converging from top to bottom and then, extending onto anteclypeus, converging near its middle, less sharp on anteclypeus, converging there at acute angle, forming weak and concavely obtuse-angled break at boundary between clypeal parts. Rostrum long, its part extending beyond posterior margin of hind coxae half as long as apical segment. Lateral ocelli large, antennae small. Pronotal disc triangular, with sharp middle and sharpest anterolateral carinae nearly reaching posterior margin and, angularly curving outward, vanishing. The only humeral carina of pronotum—dorsal (i.e., lateral carina of dorsal side of pronotum) sharp, undulate in vertical and horizontal planes, convex and arcuately lowering in anterior part, bordering there rather smooth, rounded depression of anterolateral area of dorsal side of pronotum, then concave in horizontal plane, directed upward by convexity in vertical plane; posterior area straight. Mesonotum with 3 sharp carinae; median carina vanishing in posterior part; lateral carinae subparallel, forming smooth zigzag ledge before middle, slightly approximate along ledge, and then running in parallel as far as posterior margin. Tegulae with weak carinate bent continuing lateral carina of pronotum. General plan of structure and venation of wings as that in typical *Aneipo* Kirk. (*A. diva* Kirk., *A. ceres* Fenn.). On fore wing, *RM* fork shifted to basal cell for half of its length or situated nearly right against it; first ramifying of *R*, by contrast, shifted distally for nearly 2/3 of length of costal area. First branch of *RA* ($ScRA_1$) rather short, abruptly breaking costal area; apex of vein with vague oblique break made by vein running in opposite direction relative to *ScRA*; a series of oblique veins of stigmal area, running in direction similar to that of first vein but at acuter angle, lying distal of this opposite vein. This series continuously extending onto terminal margin of wing, where base formed by line of subapical cross-veins. *RA* with 6 oblique veins. Median vein twice ramifying at nodal level; anterior branch MA_1 ramifying one more time at intermediate level; median system forming 8–10 ends behind subapical lines of veins. Nodal cross-veins *rm* lying slightly behind first fork of *MA*; *mcu*, immediately behind derivation of *MP*. *CuA* ramifying opposite middle, far before fusion of claval veins *Pcu* and A_1. CuA_2 weakly curved forward opposite 3/4 of length of clavus, weakly curved backward at apex of clavus, and more strongly curved forward again before cross-vein. Postclaval cross-vein situated in middle of distance from base of clavus to terminal margin; branch, running obliquely backward and across, originating at distance of 2/3 from CuA_2, it forming anterior comb of 2 or 3 secondary branches finishing row of apical cells. More or less regular line of subapical cells running at an angle into wing base along last branch of median system, similarly to that in *Aneipo diana* Fenn., but more symmetrically. On hind wing, *PA* without cross-veins behind frenula, *RP* and *M* 3-branched, vein *rm* running posteriorly into point of ramifying of middle vein of *M*. Anterior branch of anterior cubitus 3-branched, branching tritomic, vein *mcu* originating from point of first fork of *M*. Anal system on anojugal lobe X-shaped, with 2 apical branches and without blind processes. Hind tibia with 1 lateral tooth behind middle and 7 apical teeth arranged at concave angle; outer group with 2, inner one with 5 teeth. First segment of hind tarsus with about 8 teeth, 1 or 2 teeth in middle part of row occasionally bearing subapical setae; 2nd segment with about 10 teeth, all, except for marginal ones, bearing subapical setae.

This genus differs from *Aneipo* Kirk. in having the only (dorsal) lateral carina of the pronotum and also in the lateral carinae of the disc not reaching the posterior margin of the pronotum, long narrow face, short branch $ScRA_1$, overlapping forks of *CuA* and clavus, and long and narrow metope. Differences of this genus from *Anabunda* gen. n. are the same as from *Aneipo*.

Epiona kirejtshuki Emeljanov, sp. n.
(Fig. 11, *1–3*; 12, *1–5*)

Description. Body mostly grassy green, yellowish in places. Head distinctly brownish yellow, carinae slightly fuscous. Pronotum and scutum slightly yellowish, posterior margin of pronotum green. Fore wing

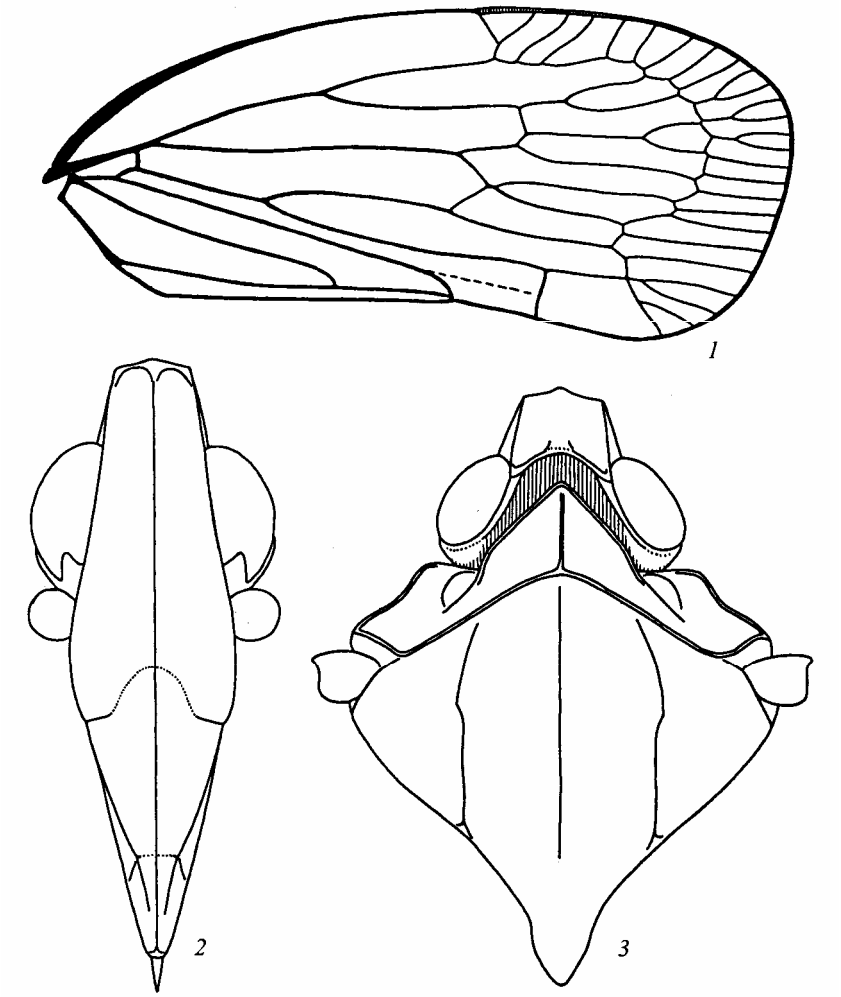

Fig. 11. *Epiona kirejtshuki* sp. n.: (*1*) fore wing; (*2*) face; (*3*) anterior part of body, dorsal view.

with fuscous costal vein and vague fuscous speckles in places; wing becoming paler toward membranule, veins remaining green. Middle part of costal area with 3 dark angular spots near radial vein, middle part of stalk of median vein with 2 ring-shaped spots extending onto areas adjoining to vein; membranule with sharp dark fuscous spot on anterior branch of median vein before subapical cross-veins. Fuscous spot present before arculus. Some other spots on veins occasionally forming 2 oblique transverse rows including ring-shaped spots; 2 rows of very indistinct fuscous spots occasionally present at apices of antiapical cells and at bases of apical cells, i.e., at sides of cross-veins. Body on lower side and legs paler, yellowish.

Male genitalia. All components symmetrical. Pygophore with wide, short, trapezoid lateral processes in posterior part, elongate and truncate ventral prominence, and deep dorsal emargination. Shape of anal tube characteristic of the tribe. Theca divided up to base into dorsal and ventral lobes. Dorsal lobe narrowed to apex, with dorsally longitudinal ridge; ventral lobe saggitally incised at apex; arcuately concave dorsal surface in the form of longitudinal groove; under it and under hooks of penis, 1 pair of thick digitate processes present, the processes nearly as long as dorsal surface. Hooks of penis with thick apices bearing subapical tooth, surface of hooks serrate over lateral and dorsal surfaces.

Body length 11.2–12.3 mm in male, 12.5–13.4 mm in female.

Material. Australia. Holotype (♂), paratypes (3 ♀): N. S. W. Nevu Nevu (Never Never?) Dorrigo N. P., 28.II.1980 (M. Lowman) (AMSA). 1 ♂? 2 ♀, Qld. Monto District Bulburin (Austral), Site 3, Alt. 580 m (24°34′S, 151°29′E), 21.III.1975 (D.K. McAlpini)

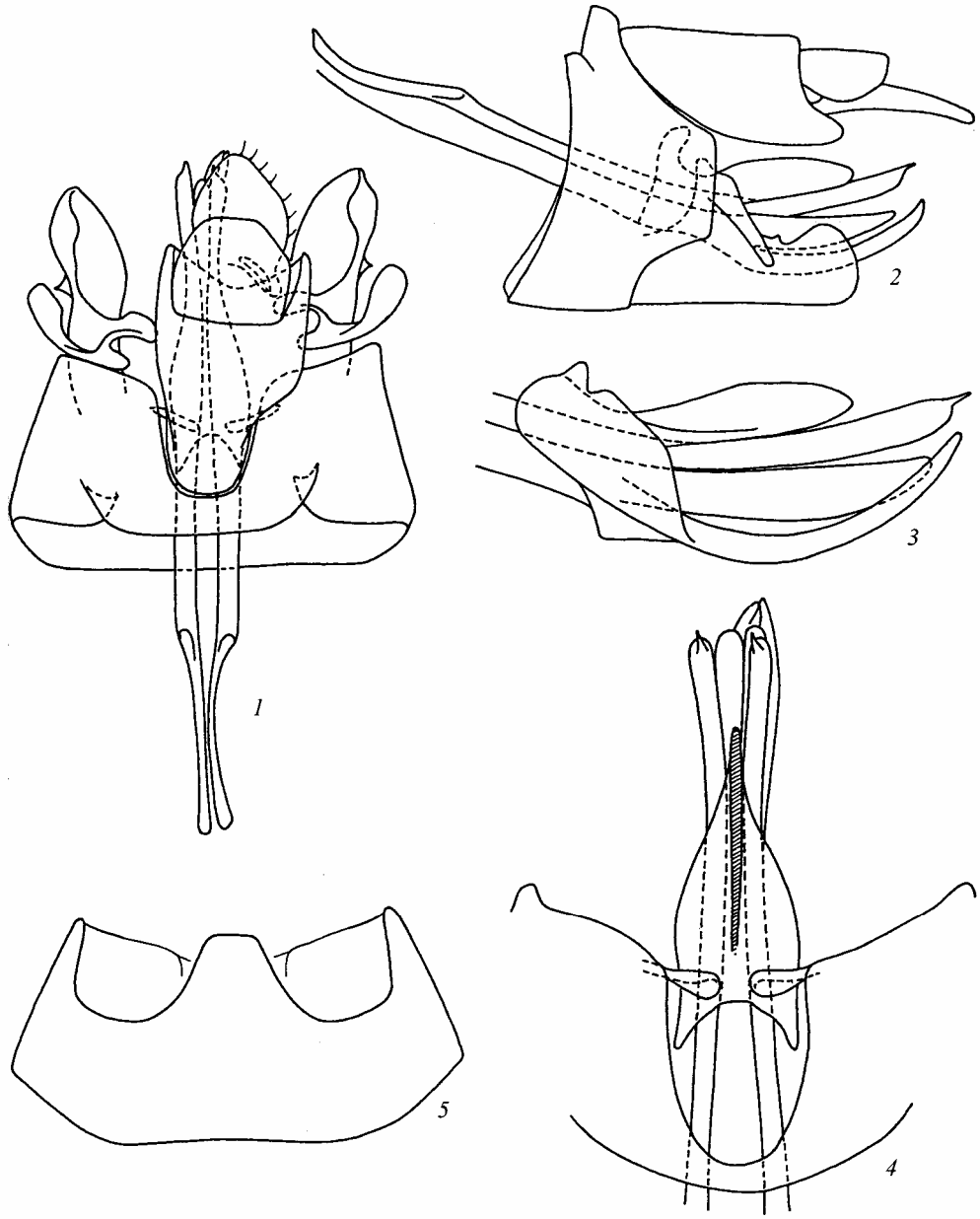

Fig. 12. *Epiona kirejtshuki* sp. n., male: (*1*, *2*) genitalia [(*1*), dorsal view; (*2*) lateral view]; (*3*) penis, left-side view; (*4*) dorsal part of pygophore and penis, dorsal view; (*5*) pygophore, ventral view.

(AMSA). 1 ♂, Qld. Lamington Nat. Park, 2700 ft., 7.XI.1961 (I.F.B. Common and M. S. Upton) (ANIC). 1 ♂, Qld. Joalah N. P. Tamborine Mt., 18–21.IX.1978 (Lawrence and Weir) (27.56S; 153.12E) (ANIC).

Genus ***ANABUNDA*** Emeljanov, gen. n.

Type species *Anabunda retortinervis* sp. n.

Description. Body large, wide; head weakly projecting forward. Coryphe transverse, abruptly narrowed forward, with gently convex anterior margin and more sharply arcuately emarginate posterior one. Surface of coryphe with rather smooth depressions separated by cariniform elevations; middle part with narrow longitudinal depression and 1 pair of rounded depressions at sides of it. Metope with 3 sharp carinae (including lateral ones), parallel-sided, slightly rounded and narrowed at upper margin, straight in lateral view, forming an acute angle with coryphe, more than 3 times as long as wide. Clypeus introduced into metope at nearly right angle, but with smoothened, hardly visible boundary. Postclypeus about 1.5 times as long as wide in upper part, cuneiform narrowed from top to bottom, about 0.3 times as wide in lower

part than in upper one; carinae sharp, lateral ones converging at acute angle near middle of anteclypeus. Antennae small, lateral ocelli large, median ocellus absent. Rostrum about as long as face. Pronotum wide, with lateral margins diverging at obtuse angle; disc large, parabolic, nearly rounded; lateral carinae nearly reaching posterior margin; median carina entire. Sides of dorsal side of pronotum with 1 carina directed to costal margin of wing; posterior margin gently obtuse-angularly prominent in middle part. Mesonotum with 3 subparallel carinae; lateral carinae less distant from each other than margins of pronotal disc, with small distinct S-shaped bend in middle part; median carina terminating before apical 1/4 of scutellum. Tegulae bud-shaped, with rather smooth carina at level of 3rd axillary plate (above lateral carina of pronotum). Fore wing thick, with sharp veins and distinctly tuberculate surface of cells, folded in the form of gently sloping roof; area of overlapping of membranules shallowly concave; soft bent extending from apex of clavus onto apical angle situated between branches *R* and *M*. Costal area wide, costal margin arcuately convex. Radial vein ramifying opposite apical 1/3 of costal area; median vein, at nodal level; anterior cubitus, slightly behind radial vein and claval loop. $ScRA_1$ and bases of RA_2 cut off by oblique cross-vein. *RP* bifurcating slightly behind nodal level; both branches of *R* forming secondary forks and cross-veins. Median vein with 4 main branches; *MA* ramifying before *MP* (apical parts with slightly confused bends and secondary cross-veins), approximating to *CuA* in basal 1/3 of corium, and connected with it there by 1 or 2 cross-veins. Both branches of anterior cubitus running along 1/3 of membranule, then one by one curving to run backward along distance equal to width of intervenal area, and curving forward again, forming thus rounded zigzag. Postclaval cross-vein, characteristic of the family, extending obliquely basad and backward from posterior bend of CuA_2. Both branches of *CuA* forming 2 or 3 branches at apical margin of wing. Legs rather slender; hind tibia with 1 lateral tooth; middle one with 7 apical teeth, among which outer one longest, next much shorter, next even shorter, and succeeding teeth becoming longer toward inner margin; apex of 1st segment of tarsus with 9 teeth, among which 3rd, 5th, and 7th bearing subapical setae; 2nd segment with 12 teeth, all, except for marginal ones, bearing subapical setae.

The new genus is closely related to the genus *Aneipo* Kirk., being similar to *Aneipo minerva* Lamb. in the structure of the vertex (coryphe) and pronotum, but clearly differing in the following characters: metope rather narrow and parallel-sided; surface of wings more strongly sclerotized and tuberculate; cross-vein *mcu* situated in middle part of corium near convergence of stalks of *M* and *CuA*; CuA_2 curved sharply, almost inversely; CuA_1 curved similarly, but less sharp; membranule with reticulate venation; arrangement of teeth bearing subapical setae on 1st segment of hind tarsus distinctive. The only lateral carina of the dorsal side of the pronotum in *Anabunda.* gen. n. is directed backward, toward the apex of the costal margin of the wing (lower humeral carina), instead of toward 3rd axillary plate (upper humeral carina) in *Aneipo*.

Anabunda retortinervis Emeljanov, sp. n.
(Fig. 13, *1–3*)

Description. Body intensively grassy green, yellowish in places. Carinae of metope and partly intervals between them yellowish; carina at anterior margin of coryphe red, with black vague punctures in middle. Carinae on pronotum brighter green, lateral lobes of its dorsal side vaguely yellowish ochre. Mesonotum entirely, including carinae, yellowish ochre. Tegulae with two obliterated spots: black one opposite 3rd axillary plate and one reddish below it. Elytra intensively green, with reddish line in basal half of costal margin. Cells slightly yellowish ochre along anterior margin of membranule. Termal margin of membranule with black line inward of peripheral vein; line interrupted by ends of longitudinal vein, is gradually widened toward posterior margin, becoming gray, and blurring into indistinct spots. Opposite apex of clavus with indistinct dark spot.

Male genitalia. Pygophore approximately ring-shaped, with lateral walls slightly angularly shifted backward and dorsal wall deeply roundly emarginate; caudomedial angles of emargination slightly approximate and connected ventrally by indistinct hyaline chord bearing suspended theca of penis. Lower wall forming wide trapezoid posterior prominence with rounded lateral angles slightly projecting apart. Anal tube short, slightly widened in posterior 1/3. Styli with rather complex dorsal process and transversely flattened apices. Theca with rather long ventral wall (incised lobe) and bidentate dorsal lobe half as long as ventral one. Lateral lobes with digitate perpendicular processes. Hooks of penis long, considerably projecting beyond apex of theca; apices of hooks thick, rounded, each bearing dorsal tooth pointing backward.

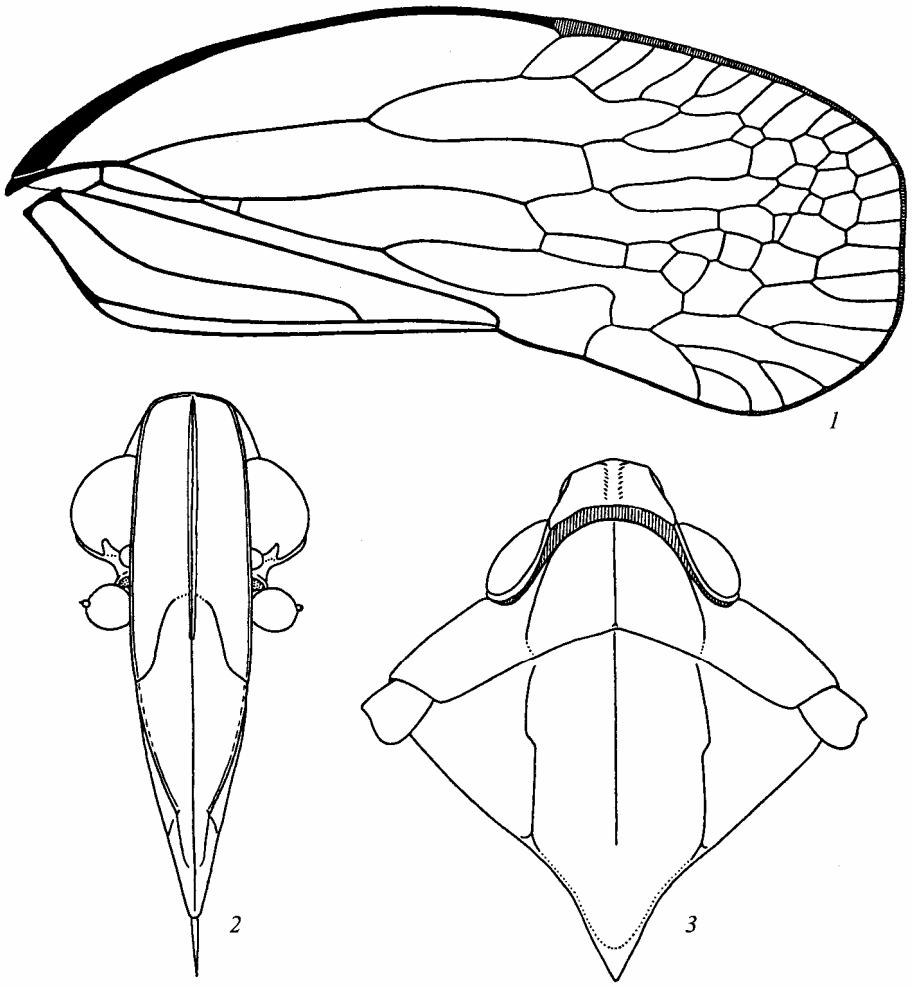

Fig. 13. *Anabunda retortinervis* sp. n.: (*1*) fore wing; (*2*) face; (*3*) anterior part of body, dorsal view.

Body length 9.2–9.6 mm in male, 12 mm in female.

Material. Australia. Holotype: ♂, N. S. W. Coff's Harbour, 15.X.1958. T.G. Campbell (ANIC). Paratypes: 1 ♀ Qld. 10 km SSE of Yeppoon, 21.X.1975 (I.F.B. Common) (ANIC). 1 ♂, N. S. W. 6 km WSW of Bingara, 457 m, 6.XII.1974 (I.F.B. Common and E.D. Edwards) [150.31E, 29.53S] (ANIC).

Genus ***RHINOCHLORIS*** Emeljanov, gen. n.

Type species *Rhinochloris acutirostris* sp. n.

Description. Head forming conical process with narrow apex. Wings folded in the form of gently sloping roof, demonstrating transition to enveloping type of folding. Lateral contour of body forming uniform smooth curve from apex of head to costal margins of folded wings, only weakly convex eyes protruding slightly beyond this contour. Vertex elongate, triangular, cuneiform, with shallowly emarginate lateral margins and deeply arcuately emarginate posterior margin. Surface of vertex nearly flat, slightly groove-shaped in anterior part, with longitudinal carina in posterior part, weakly concave in lateral view. Apex of vertex very narrowly transversely truncate. Preocular area (sides of head process) narrowly cuneiform, also narrowly truncate at apex; its basal anterior part formed by trigone nearly separated by oblique carina originating from margin of coryphe slightly in front of eyes, extending obliquely forward and downwards, and running into margin of metope at a distance from eye slightly less than longitudinal diameter of eye. Metope elongate, irregularly narrowed to apex, widest below antennae, flat nearly up to level of upper margins of eyes, gently roof-shaped in upper part, weakly concave in lateral view; its lateral margins convex, slightly approximate near clypeus; middle part from antennae to upper margins of eyes weakly narrowed upward, with shallowly emarginate lateral margins; above eyes,

margin of metope smoothly obtuse-angularly curved at transition into cuneiform apical part; lateral margins of metope also shallowly emarginate there; median carina of metope sharp. Boundary between clypeus and metope ill-defined, less distinct in middle part. Clypeus running into metope along broken line, boundary margins of clypeus converging at obtuse angle, then turning upward, and parabolically converging at acute angle, deepening into metope nearly up to level of antennae. Postclypeus cuneiform, with sharp lateral and median carinae; lateral carinae, extending onto anteclypeus, arcuately turning into each other near its boundary with postclypeus; this arcuate carina also sharp; anteclypeus mainly abruptly roof-shaped and only with 1 median carina. Middle part of postclypeus, including area of anteclypeus delimited by carina and area running into metope at acute angle, forming longitudinal lanceolate-elliptic flat elevation delimited at sides by shallow arcuate longitudinal depressions. Lateral ocelli put right against eye; lateral part of head narrow there, and ocellus as though clamped between lateral carina of metope and eye. Eye with deep lower emargination. Antennae simple, small. Rostrum rather short, reaching only posteromedial margin of hind coxae. Apical and preapical segments of subequal length. Pronotum rather long; its disc parabolically projecting forward as far as level of anterior margin of eyes. Anterior part of disc arcuately parabolic, posterior one with straight margins diverging backward; median carina sharp along entire length; lateral carinae also sharp, more or less distinctly reaching posterior margin. Anterior margin of pronotum prominent behind eyes at sides of disc. Lateral margins of dorsal side of pronotum long, longer than longitudinal diameter of eye; lateral and collateral carinae straight, diverging backward, sharp, subapical. Posterior margin of pronotum gently arcuate along most part of length opposite scutum. Scutum large, gently arcuate and weakly projecting forward in anterior part, bearing 3 sharp parallel carina: lateral carinae S-curving and continuing carinae of pronotal disc. Apex of scutellum not rounded, forming acute, nearly right angle. Fore wing moderately slender; costal margin uniformly gently arcuate, subparallel to sutural margin of clavus in distal part; membranule occupying about 2/5 of length of wing. Costal area distinctly wider than succeeding ones. Common stalk of *RM* distinctly shorter than half length of basal cell. *R* first ramifying at level of middle of costal area; *RA* first ramifying in middle of distance from base of *RA* to nodus; therefore, first branch of *RA* (delimiting pterostigma) long, obliquely longitudinal; pterostigma crossed by 7 or 8 oblique veins. Cells of pterostigma gradually turning in distal part into series of apical cells formed by branches of succeeding veins. Median vein ramifying slightly before nodal level, both branches ramifying in basal 1/3 of membranule; posterior branch of *RA* not ramifying again, anterior one forming at most 4 branches; anterior branch of *RP* not ramifying, posterior one forming at most 3 branches. *CuA* ramifying slightly behind middle of suture of clavus. Area *mcu* strongly narrowed, second cubital area also narrowed, i.e., branch CuA_2 running near suture of clavus, slightly curving forward at apex of clavus, and then running in parallel to posterior margin of membranule. Nodal cross-vein *mcu* lying at level of apex of clavus; cross-vein *rm* situated much more distally, connecting secondary branches of *R* and *M*. Apical chain of cross-veins continuing cells of pterostigma (i.e., vein RA_2) moving away from apical margin of wing and approximating to vein CuA_2. Achilid vein curved at obtuse angle, at first running obliquely inversely, then turning perpendicularly to margin. Claval veins fused in distal 1/4 of clavus. Consistence of fore wing dense, many cells bearing scattered tubercles, other cells softly transversely rugose; tubercles densest in costal area, sparser on radial and median areas closer to apex and in middle part of membranule. Apex of hind tibia with 7 teeth (2 + 5); 1st segment of tarsus with 7 teeth, among these only 3 middle ones bearing subapical setae; 2nd segment with 9 teeth, all, except for marginal ones, bearing subapical setae.

Rhinochloris acutirostris Emeljanov, sp. n.
(Figs. 14, *1–4*; 15, *1–3*)

Description. Female. Coloration mainly grassy green, head mainly yellowish fuscous, mesoscutum yellowish. Apical third of coryphe yellowish, with vague fuscous spots; rest (posterior) part green. Lateral areas of head process fuscous, with pale spots. Face uniformly yellowish orange. Fore wing dense, not hyaline. Corium and clavus with sparse weak vague fuscous spots arranged as those in *Epiona kirejtshuki*; membranule with more distinct fuscous spot in anteapical cell near anterior branch of median vein. Lower side of body yellowish; legs yellowish red, becoming more red toward apices.

Body length 5.8 mm.

Male unknown.

Material. Australia. Holotype: ♀, N Qld, The Crater, near Herberton, 4.I.1967. MV lamp (D.K. McAlpine and C. H. Holloway) (AMSA).

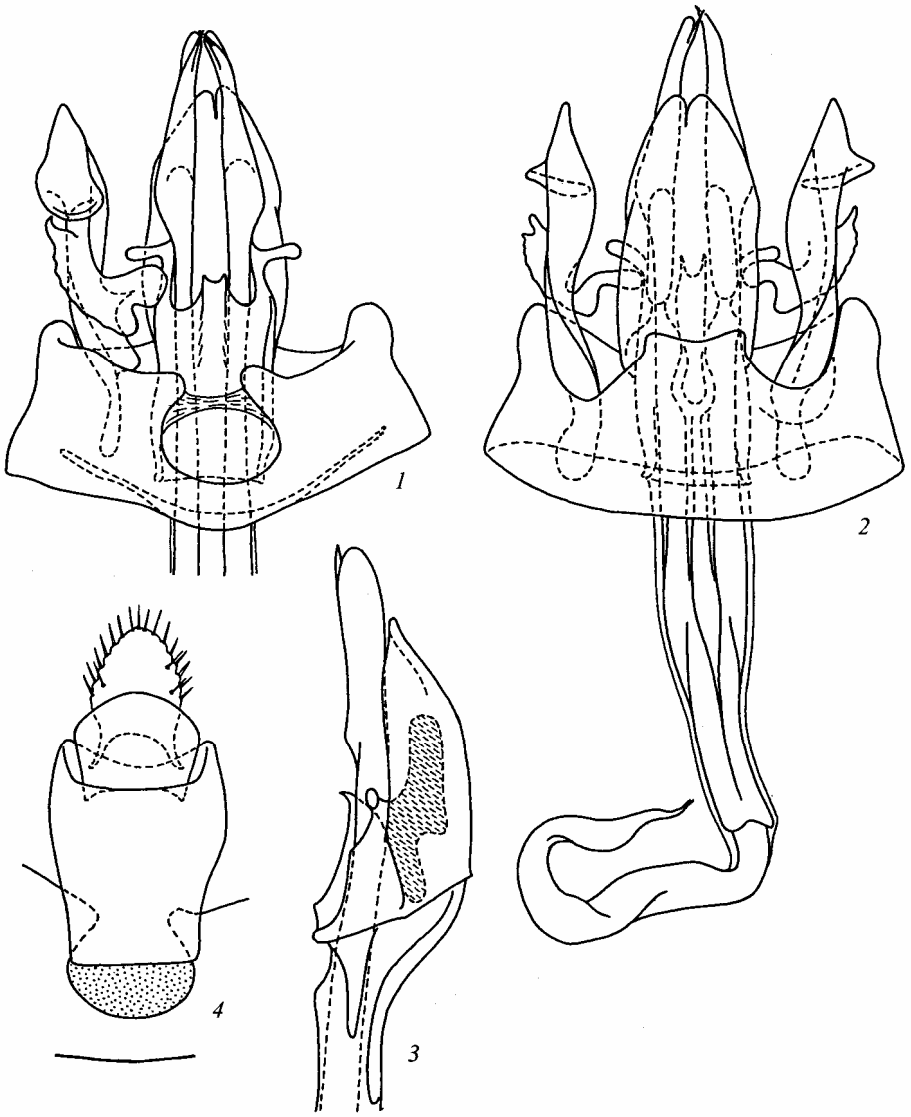

Fig. 14. *Anabunda retortinervis* sp. n., male: (*1*) genitalia, dorsal view (anal tube and left stylus removed); (*2*) genitalia, ventral view; (*3*) penis, left-side view; (*4*) anal tube and dorsal part of pygophore, dorsal view.

Genus ***CIXIDIA*** Fieber, 1866

Cixidia shikokuana Ishihara, 1954, comb. n. (*Epirama shikokuana* Ishihara, 1954).

Cixidia polias Emeljanov, sp. n. (Fig. 16, *1*, *2*)

The species is closely related to *Cixidia lapponica* Zett. (Fig. 16, *3*); for differences, see a key to species of the genus *Cixidia.*

Description. Collateral carina of pronotum rather smooth, visible only in posterior 1/3.

Female. Body almost uniformly gray. Coryphe pale, fuscous, with dark fuscous triangular spots at posterior corners. Metope pale, brownish and whitish yellow, brownish fuscous in upper part distinctly above middle of eyes, with 4 pale spots along upper margin. Clypeus fuscous. Upper part of gena below eye and preocular area from straight line connecting upper margin of antennal socket and upper margin of ocelli brownish fuscous; supraocular area also fuscous, with oblique pale spot in middle part, pale upper margin in posterior part, and oblique dark fuscous spot between these pale areas above eye. Pronotum fuscous, with fine delicate pale specks; paranotal lobes with yellowish white lower margin, black above, along line continuing lower margin of dark areas at sides of head, gradually becoming fuscous toward humeral carina. Mesonotum reddish fuscous, with fine dense pale fus-

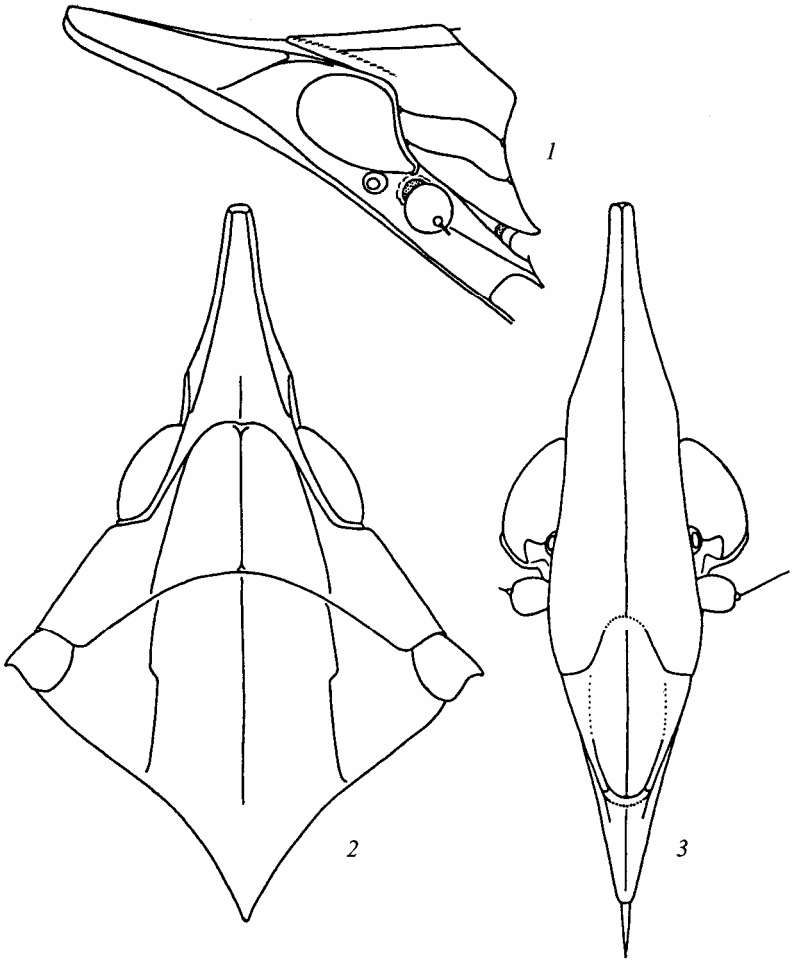

Fig. 15. *Rhinochloris acutirostris* sp. n.: (*1*) head and pronotum, lateral view; (*2*) anterior part of body, dorsal view; (*3*) face.

cous specks; carinae darker laterally. Wings uniformly gray, with darker veins; cross-veins on membranule pale; costal and 2nd claval veins with fuscous areas and indistinct pale specks. Body on lower side and legs pale fuscous.

Body length 8.7 mm.

Material. Holotype: ♀, Russia, Krasnodar Terr., Ubinskaya, 1.VII.1976 (Belov) (ZIN).

Cixidia kabakovi Emeljanov, sp. n. (Fig. 16, *3*)

Description. Collateral carina of pronotum sharp, visible nearly as far as its anterior margin. Body dark fuscous, with pale specks. Coryphe dark fuscous, with fine pale specks. Upper side of metope dark fuscous, with speckles mainly grouped near carinae; boundary between dark and pale areas concave or more or less straight; rest of metope and clypeus lightened. Upper part of genae below eye and also preocular area above straight line connecting upper margin of antennal socket and upper margin of ocelli brownish fuscous, speckled, as well as entire supraocular area. Pronotum dark fuscous, with fine pale speckles; paranotal lobes nearly black behind collateral carina, with white lower margin. Mesonotum also uniformly finely speckled, with carinae of the same color. Wings dark fuscous, with rather regularly dense pale specks. Pronotal cross-veins and apices of longitudinal veins white. Body on lower side and legs pale, flesh-white; mesepimera dark fuscous.

Male genitalia. Shape of pygophore typical of the genus. Medioventral prominence rather long, similar to that in *C. lapponica*, but with sharper apical emargination. In front of dorsal emargination, pygophore with 3 transverse linear desclerotized areas closed at both ends: lateral areas shifted slightly backward relative to middle area. Styli also without clear distinctions. Anal tube moderately elongate, slightly widen-

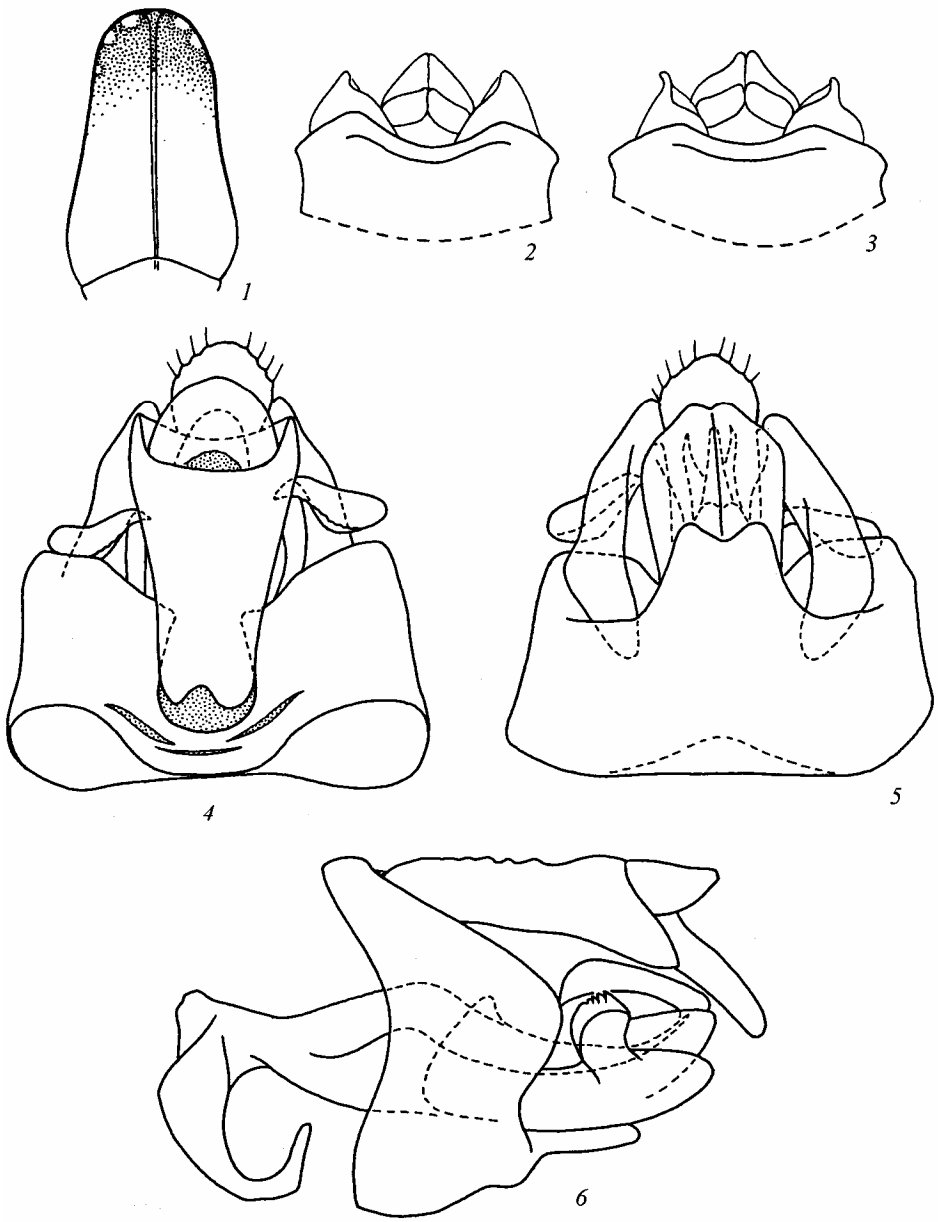

Fig. 16. *Cixidia* spp.: (*1*, *2*) *C. polias* sp. n. [(*1*) metope; (*2*) subgenital sternite of female]; (*3*) *C. lapponica* Zett., subgenital sternite of female; (*4–6*) *C. kabakovi* sp. n., male genitalia [(*4*) dorsal view; (*5*) ventral view; (*6*) lateral view].

ing toward truncate apex; posterior margin gently emarginate; lateral angles nearly straight. Penis with short basal part. Theca of penis with wide ventral lobe shallowly emarginate at apex. Inner (dorsal) surface of ventral lobes bearing in many Achilidae 1 pair of processes or lobes somehow used to hold hooks of penis. In *C. kabakovi* sp. n., these lobes are strongly shifted toward the base of the theca and flattened dorsoventrally, which, apparently, is the most distinct difference of the new species from the other known species.

Body length 7.2 mm in male, 8.6 mm in female.

Material. Holotype: ♂, Afghanistan, Avragal River, 2000 m, 7–9.VI.1971 (Kabakov) (ZIN). Paratype: ♀, as holotype.

A Key to Species of the Genus Cixidia of the Russian Fauna (*including C. kabakovi sp. n. from Afghanistan*)

1(8). Metope darkened in upper part. Paranotal lobes with white lower margin, is boundary with dark dorsal side sharp. Black line-shaped spot with pale margins lying above eye. Area between antenna and eye and that between ocellus and eye darkened. Posterior angles of coryphe darkened.

2(5). Clypeus and lower side of body dark.

3(4). Upper part of metope entirely darkened, boundary of dark area obtuse-angularly concave, distinct ..... *C. lapponica* Zett.

4(3). Upper part of metope darkened only along margins, pale area extending far upward along median carina, boundary indistinct .... *C. ussuriensis* Kusn.

5(2). Clypeus and lower side of body pale.

6(7). Collateral carina of pronotum rather smooth, darkened only in posterior 1/3 ... *C. polias* sp. n.

7(6). Collateral carina of pronotum sharp, darkened nearly as far as anterior margin of pronotum .... *C. kabakovi* sp. n.

8(1). Metope and paranotal lobes one-colored. No dark spot (line) present above eyes. Areas between antenna and eye and between ocellus and eye pale. Posterior angles of coryphe pale.

9(12). Metope uniformly pale above level of antennae.

10(11). Lower margin of paranotal lobes lightened even in anterior half . *C. pilatoi* D'Urso et Gugl.

11(10). Lower margin of paranotum not lightened .... *C. mersinica* Dlab.

12(9). Metope entirely more or less uniformly darkened ..... *C. kasparyani* Anufr.

Tribe **ACHILLINI** Emeljanov, 1991

Genus ***MAURISCA*** Emeljanov, gen. n.

Type species *Maurisca bimaculata* Emeljanov, sp. n.

Description. Coryphe about 4 times as wide as long. Anterior and posterior margins of coryphe obtuse-angularly weakly projecting forward, (sub)parallel; median longitudinal suture ill-defined. Rostrum longer, 2/3 (1/2 in *Achilla*) of length of its penultimate segment projecting beyond apex of clypeus; ultimate segment about as long as wide (wider than long in *Achilla*). Vertex shorter than pronotal disc (vice versa in *Achilla*). Sides of pronotum at lateral carinae wider. Frontal lanceolate platform at sides of pronotum with obsolete posterior (i.e., median) boundary, directed outward and backward. Tegulae with poorly developed carina. Mesonotum with lateral carinae slightly approximating at posterior ends. Nodal vein ($ScRA_1$) perpendicular to wing. In addition to nodal veins, only 1 subapical row of cross-veins present; nodal veins *rm* and *mcu* always developed, *ir* distinct on one wing and absent on the other. Median vein symmetrically 4-branched or *MA* with 3 branches in posterior comb. Apex of wing nearly symmetrically rounded. Subapical cross-veins weakened (crimped); postclaval cross-vein also weakened; CuA_{2b} at base of CuA_{2a}; longitudinal veins M_{1+2} weakened along short distance in middle of membranule in area of branching into M_1 and M_2, and also M_3 and M_4 (at the same level, but after branching). Stalk of *ScRM* short, about as long as arculus; stalk *ScR* rather long. Hind tarsus with 6 teeth on 1st segment and 5 teeth on 2nd one.

Male genitalia symmetrical (see the below description of the species).

Maurisca bimaculata Emeljanov, sp. n.
(Fig. 17, *1*, *2*; 18, *1–7*)

Description. Body dark fuscous to black; head, pronotum, and lower side of body, except for legs, paler; posterior margins of abdominal sternites also paler. Pterostigma of fore wing with white triangular spot extending from cross-vein along anterior margin. Posterior margin of spot indistinct, with dark obliterated teeth projecting along cross-veins; all weakened areas of veins also lightened.

Male genitalia. Anterior basal part of pygophore very short in upper and lateral parts, almost uniformly ribbon-shaped, shallowly emarginate in upper part before base of anal tube, considerably widened in lower part and projecting backward in the form of wide, short, concavely and obtuse-angularly truncate process. Anal tube with small segment X and enlarged appendages; segment X slightly shorter than wide, with shallowly emarginate anterodorsal and posterodorsal margins; dorsal wall of posterodorsal margin arcuately convex in lateral view. Dorsal sclerotization of segment XI about as long (and as wide) as segment X, but divided medially nearly up to posterior margin by elongate triangular membranous area narrowed backward. Anal column entirely sclerotized, glabrous, flattened dorsoventrally in the form of nearly regular circle; upper side slightly convex, lower one concave; posterior margin slightly curved downwards; diameter of column about twice width of segments X and XI. Lateral parts with strong, deeply bifurcate prominences-lobes: upper prominence simply tapered, lower one bifurcate; bases of lobes separated from basal ring of pygophore by sharp ledge. Styli identical, with widened and flattened apex, upcurved, with large basodor-

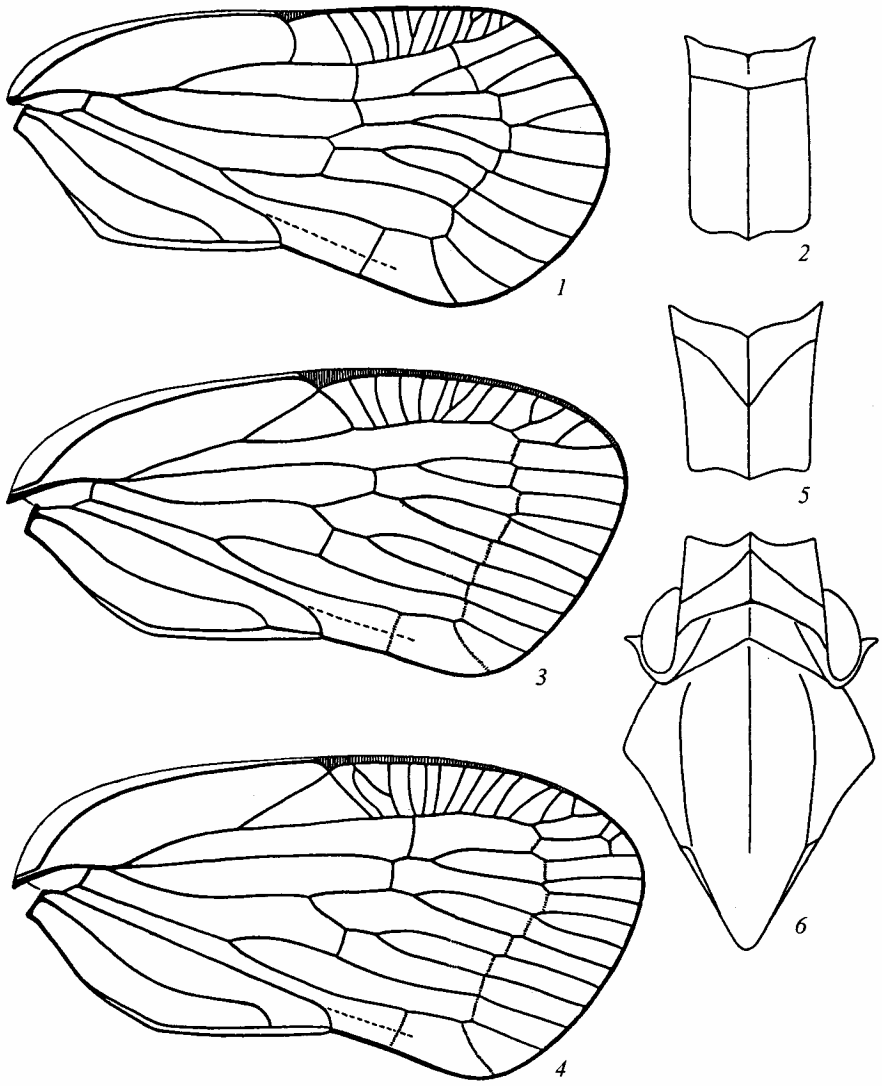

Fig. 17. Tribe Achillini, fore wings and head: (*1*, *2*) *Maurisca bimaculata* sp. n.: [(*1*) fore wing; (*2*) coryphe and metope, view perpendicularly to plane of coryphe (anterodorsally); (*3–6*) *Achilla marginatifrons* Hagl.: [(*3*, *4*) fore wing: (*3*) lectotype, (*4*) paralectotype]; (*5*) coryphe and metope, view perpendicularly to plane of coryphe (anterodorsally); (*6*) anterior part of body, dorsal view.

sal process curved outward (laterally). Penis asymmetrical.

The species differs from the genus *Achilla* in the symmetrical anal tube and in the shape of the pygophore and styli.

Body length 7.6–7.9 mm in male, 8.8 mm in female.

Material. Holotype: ♂, with label "Rep. Centroafricaine, Boukoko", 7.III.1968 (Michel Boulard) (MNHN). Paratypes: 2 ♂, "Rep. Centroafricaine, Boukoko", 7–9.III.1968 (Michel Boulard) (MNHN); 1 ♀, "Kamerun, Barombi, Conradt" (IZPAN).

Genus ***ACHILLA*** Haglund, 1899

Achilla nyx Emeljanov, sp. n. (Fig. 19, *1–11*)

The species is similar to *A. marginatifrons* Hagl., but, as also *A. hecate* Em., differs from it in the presence of scattered secondary cross-veins on the membranule behind the basal row and in the carinae of the anterior margin of the coryphe converging at an obtuse angle. From *A. hecate*, it differs in the structure of the genitalia and more strongly developed pale pattern.

Description. Body uniformly black and matte, dark fuscous on lower side; face frequently also paler, dark fuscous. Lateral carinae of coryphe and metope lightened up to white. Antennae with pale fuscous 1st, and

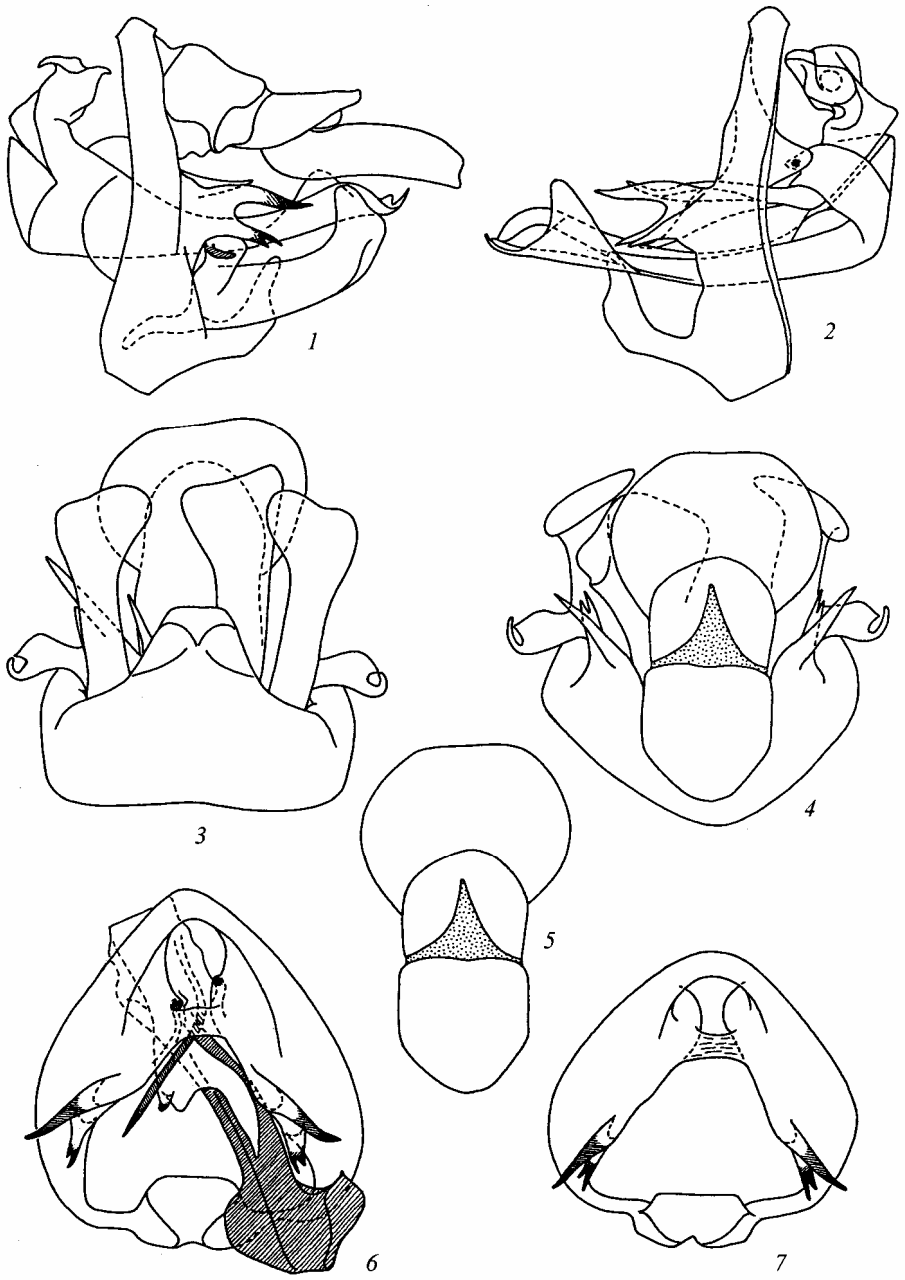

Fig. 18. *Maurisca bimaculata* sp. n., male: (*1–4*) genitalia [(*1*) left-side view, (*2*) right-side view (anal tube and styli removed), (*3*) ventral view; (*4*) dorsal view]; (*5*) anal tube, dorsal view; (*6*) pygophore and penis, posterior view; (*7*) pygophore, posterior view and, dorsal view.

dark fuscous 2nd segments. Posterior margins of sides of pronotum with inconspicuous white marks. Additional cross-veins on fore wing slightly lightened.

Male genitalia. All parts asymmetrical. Pygophore roundly triangularly narrowed upward in posterior view; its lateral wall narrow in upper part, wide and convex in lower part, with curved median suture (inner ridge). Posterior margin with asymmetrical, apically bifurcate ventral process, left tooth longer than right one. Left lateral wall bearing slightly above middle long sclerotized apophysis pointing medially and reaching saggital plane; it serving as left condyle for articulation with phallobase. Sclerotization of right lateral wall of pygophore extending onto posterior wall as large irregular structure bearing long tooth pointing backward, median margin of this structure serving as right condyle for articulation with phallobase. Anal tube very similar to that in *A. hecate* Em.,

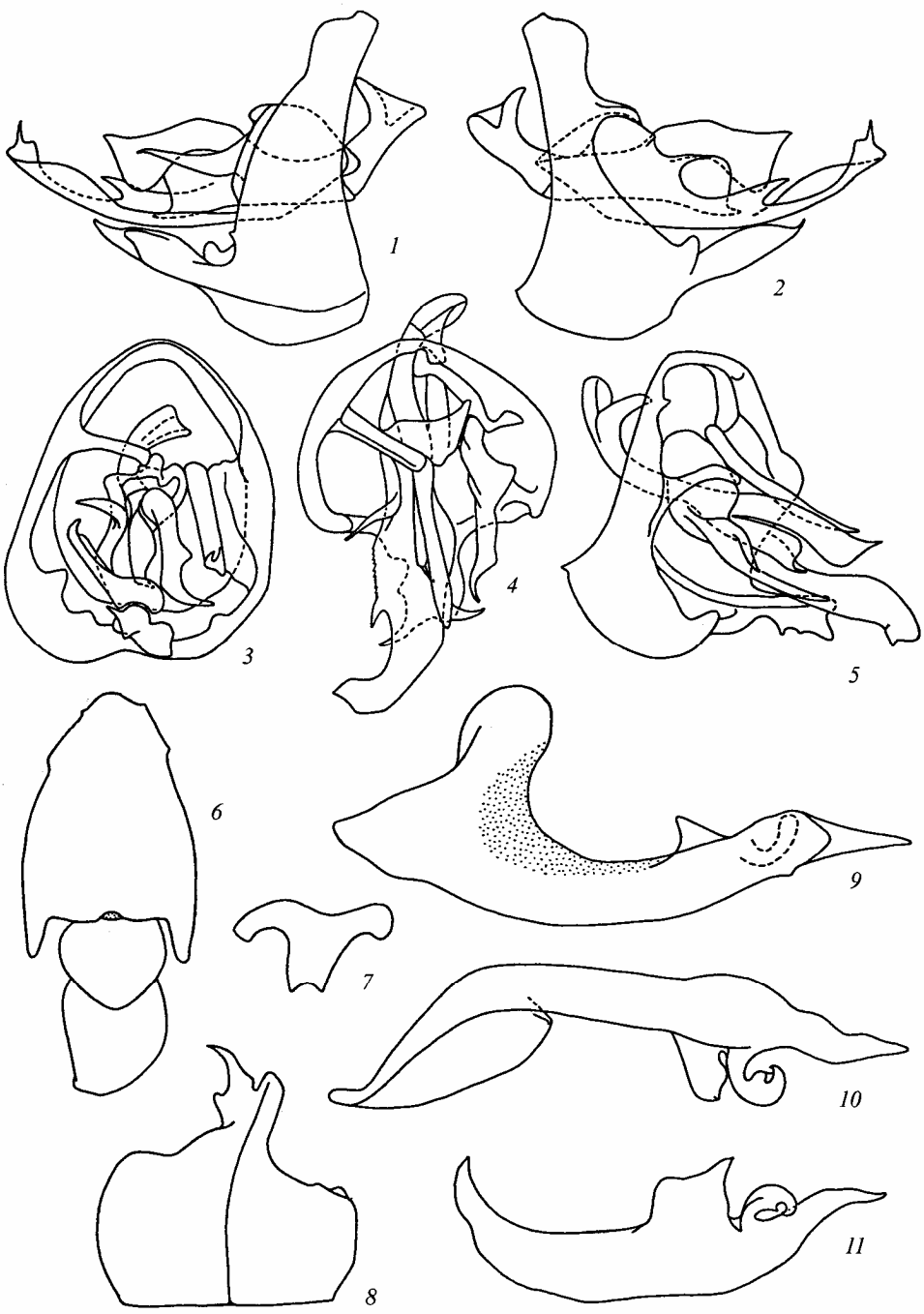

Fig. 19. *Achilla nix* sp. n., male genitalia: (*1–5*) articulated pygophore and penis, anal tube and styli removed [(*1*) right-side view; (*2*) left-side view; (*3*) posterior view; (*4*) postero-dorsal view; (*5*) left-side–posterior view]; (*6*) anal tube, dorsal view; (*7*) apex of anal column, posterior view; (*8*) pygophore, ventral view; (*9*) left stylus, ventral view; (*10*) left stylus, left-side view; (*11*) right stylus, right-side view.

with asymmetrical apex of strongly sclerotized anal column. Styli sharply different: left one larger and longer, with large median subapical lobe and hook-shaped basal, and lobiform subbasal prominences; right stylus shorter, narrow up to apex, with basal structures similar to those in left stylus. Styli having no hard connection with base of penis, as stalk of endoconnective absent (reduced). Penis asymmetrical. Phallobase (at base of penis) forming narrow dorsal crosspiece and long asymmetrical ventral process

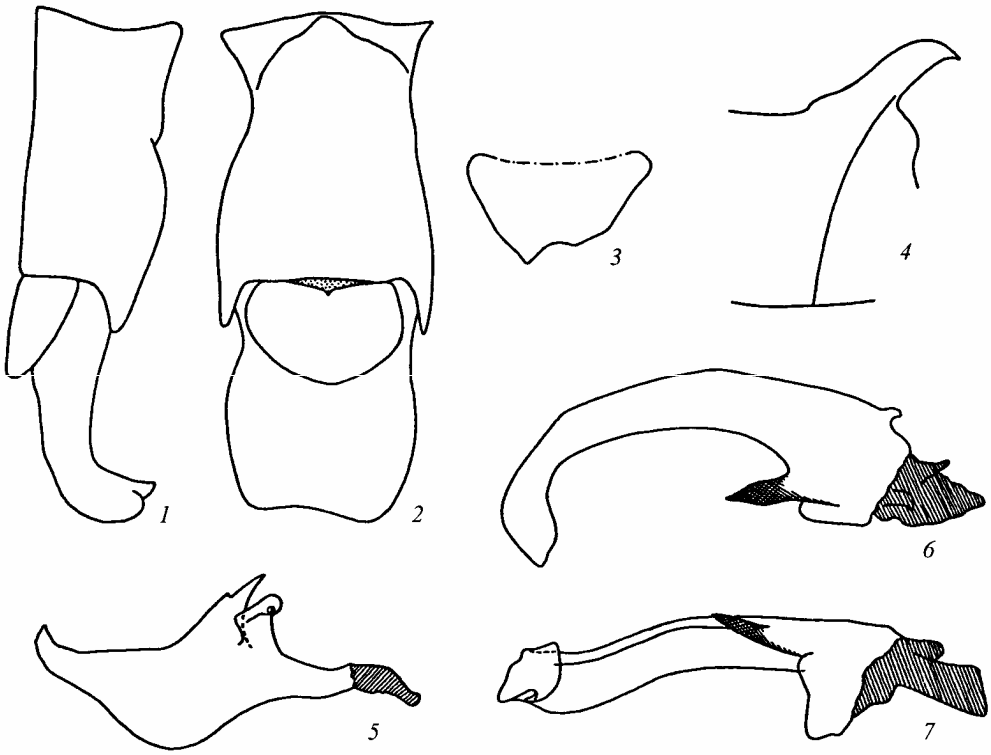

Fig. 20. *Achilla marginatifrons* Hagl., male genitalia: (*1*, *2*) anal tube [(*1*) right-side view; (*2*) dorsal view]; (*3*) apex of anal column, posterior view; (*4*) ventral part of pygophore, ventral view; (*5*) left stylus, left-side view; (*6*, *7*) left parameres [(*6*) left-side view; (*7*) dorsal view].

flattened dorsoventrally, slightly falcately curved by convexity to the right, and bearing on left side 2 widely placed teeth. Aedeagus also in the form of 2 dorsoventrally flattened asymmetrical structures with truncate apex; right posterior angle of each structure attenuated in tooth—entirely sclerotized hook of penis.

Body length 9.5–10.5 mm in male, 12.2 mm in female.

Material. Holotype: ♂, Nigeria, label: "Olokemeji Nigeria Afr 1914" and "JC Bridwell coll." (USNM). Paratypes: 1 ♂, Cameroon, labels: "Cameroons. Escalera. 1903—355" (BMNH); 1 ♀, Cameroon, label: "Kamerun Barombi Konradt" (IZPAN).

The new species is closely related to the type species of the genus, *A. marginatifrons* Hagl. (Fig. 17, *3–6*; 20, *1–7*), but differs from it in the absence of the median tooth on the left side of the ventral process of the phallobase and in details of the structure of the left stylus and anal tube (Fig. 20, *1–7*). The preparation of the lectotype of *A. marginatifrons* that I examined was made inaccurately, with some details being lost (right stylus, part of penis, part of pygophore).

Differences between the Genera Achilla Hagl. and Maurisca gen. n.

1(2). Coryphe about as long in middle as at sides, 2/3 of penultimate segments of rostrum projecting beyond apex of clypeus. Mesonotal carinae distinctly converging backward. *R* and *M* forming common stalk originating from basal cell. Nodal vein of fore wing exactly perpendicular. Apex of wing almost symmetrically rounded .... *Maurisca* gen. n.

2 (1). Coryphe much longer in middle than at sides. Half of penultimate segments projecting beyond apex of clypeus. Mesonotal carinae subparallel. *R* and *M* originating from basal cell separately. Apical vein $ScRA_1$ obliquely longitudinal, prenodal. (Membranule with 2–4 cross-veins in each area). Apex of wing distinctly obliquely truncate ..... *Achilla* Hagl.

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REFERENCES

1. Fennah, R.G., "A Generic Revision of the Achilidae (Homoptera: Fulgoroidea) with Descriptions of New Species," Bull. Brit. Mus. (N.H.) Entomology **1** (1), 1–170 (1950).
2. Lambkin, K.J.," The Australian Achiline Genera *Aneipo* Kirkaldy and *Bunduica* Jacobi (Homoptera: Fulgoroidea: Achilidae)," J. Aust. Entomol. Soc. **17** (1) 25–40 (1978).
3. Melichar, L., "Monographie der Tropiduchinen (Homoptera)," Verhandl. Naturforsch. Verein. Brünn. **53**, (1914).
4. Metcalf, Z.P., Tropiduchidae. General Catalogue of the Homoptera, No. 4, Part 11 (1954).