

The genera *Gastrallus* Jacquelin du Val, 1860, and *Falsogastrallus* Pic, 1914 (Coleoptera: Anobiidae) of Palaearctic Eurasia

Роды *Gastrallus* Jacquelin du Val, 1860 и *Falsogastrallus* Pic, 1914 (Coleoptera: Anobiidae) палеарктической Евразии

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КЛЮЧЕВЫЕ СЛОВА: Coleoptera, Anobiidae, Anobiinae, *Gastrallus*, *Falsogastrallus*, Евразия, Палеарктика, новые виды, определительные таблицы.

ABSTRACT. Three new species of Anobiidae (Coleoptera): *Gastrallus erdosi*, *G. ornatulus*, *Falsogastrallus curtus* spp.n. are described from Palaearctic region of Eurasia. Validity of *Gastrallus rollei* Reitter, 1912, is restored. The keys are proposed for Euroasian Palaearctic species of genera *Gastrallus* Jacquelin du Val, 1860, and *Falsogastrallus* Pic, 1914.

РЕЗЮМЕ. Описаны три новых вида жуков-точильщиков (*Gastrallus erdosi*, *G. ornatulus*, *Falsogastrallus curtus* spp.n.) из палеарктического региона Евразии. Восстановлена валидность вида *Gastrallus rollei* Reitter, 1912. Предложены определительные таблицы евразийских палеарктических видов из родов *Gastrallus* Jacquelin du Val, 1860, и *Falsogastrallus* Pic, 1914.

Dr. F. Español while studying *Gastrallus* species [Español, 1963] noted that it is often difficult to separate species using external characters only, so it is necessary to study the genital apparatus. Español draw figures of aedeagus of many *Gastrallus* species and also restored and clearly separated the genus *Falsogastrallus* Pic, 1914, on the base of investigation of aedeagus structures. But Español distinguished *Gastrallus* females only by the difference in forms of antennal club segments. This is very hard for such a little beetles.

I continued the studying of *Gastrallus* species from Euroasian Palaearctic region. Luckily I found some additional external characters to differentiate *Gastrallus* species; among thir number are pubescence of pronotum and elytra, structures of meso- and metasternum, view of surface and so on. Using these new characters I restored the validity of *Gastrallus rollei* Reitter, 1912, whose holotype was kindly sent to me by Dr. O. Merkl from Hungarian Museum of Natural History (HMNH). I gave figures of some pseudopositor ends if it was possible. In addition I indicated the species features of

pseudopositors. Besides I wrote descriptions of two new *Gastrallus* species from Izrael and the Caucasus and composed the key to *Gastrallus* species from Eurasian Palaearctic region (without Japanese species). I also expanded genus *Falsogastrallus* adding description of new species from Jordan. As starting point I was guided by works of Español [1963, 1970, 1977], Español and Bellés [1984], Jablokov-Khnosaryan [1960], Logvinovskij [1978, 1985], Lohse et al. [1969]. I composed a small key for *Falsogastrallus* species from Europe and Kazakhstan.

Part of materials is deposited in the collection of the Zoological Museum of the Moscow State University (ZMUM).

Genus *Gastrallus* Jacquelin du Val, 1860

Gastrallus erdosi sp.n.

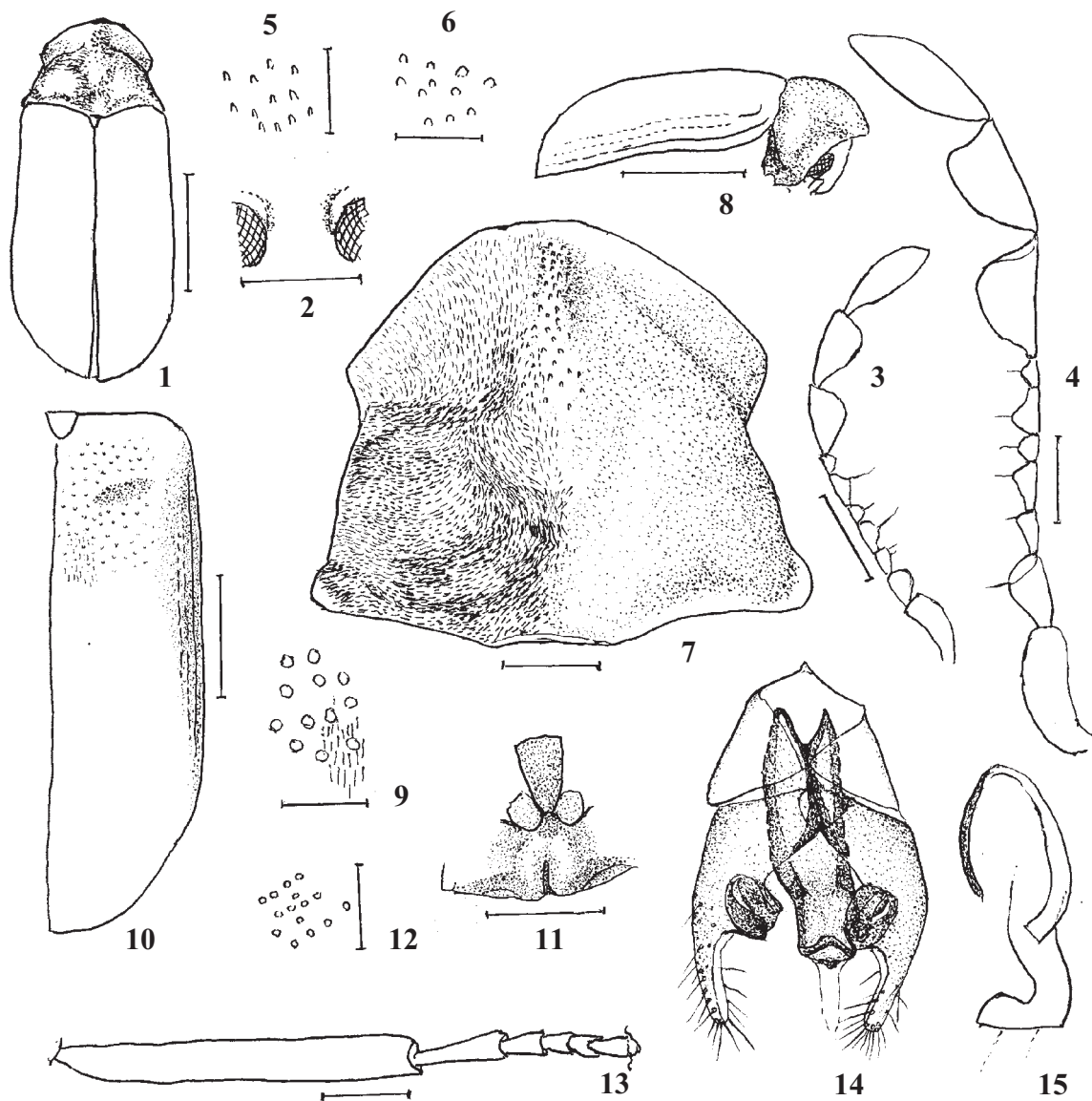
Figs 1–15.

MATERIAL. Holotype: ♂. Israel, Rehlot, 1965.V.26 (dr.Erdős), Coll. Dr.J.Erdős. HMNH. 3 Paratypes: 1 spec. with the same label; 1 spec : Israel, Karmel, 1965.V.31 (dr. Erdős), Coll. Dr. J. Erdős. HMNH; 1 spec. with latter label in ZMUM.

DESCRIPTION. General view. Dark-brown with silky shine, tibiae brown, antennae and tarsi yellowish. Pubescence pale-grey, shining, fine, appressed, more or less covering the surface. Body 2.6–2.66 times as long as wide (Fig.1).

Head. Frons convex transversely between eyes, sometimes with small elevation. Eyes nearly round, slightly convex, separated by 0.9 (♂)–1.3 (♀) vertical eye diameters, with convexity above every eye on its inner side (Fig.2). Antennae of 10 segments. All funicle segments longitudinal with small teeth inside; 4th and 6th segments the largest not counting the 2nd one (Figs 3,4).

Pronotum 1.2 times as wide as long. Apical margin slightly raised in the centre; pronotal apical quarter widen at sides. Pronotum with longitudinal elevation with higher and denser granules on the middle apical third (Fig.5); sides with slightly convex granules (Fig.6). Pronotal centre convexly obtriangular. Posterior angles obtuse, narrowly flattened, hardly rounded. Transversal depressions are seen on either



Figs 1–15. *Gastrallus erdosi* sp.n.: 1 — general view; 2 — frons and eyes; 3 — antenna of ♂; 4 — the same of ♀; 5 — granulation on longitudinal elevation of pronotum; 6 — the same on pronotal side; 7 — pronotum (with pubescence pattern); 8 — body, lateral view; 9 — granulation on elytral disk; 10 — elytron; 11 — meso- and metasternum; 12 — granulation on metasternum; 13 — hind tibia and tarsus; 14 — aedeagus, dorsal view; 15 — end of penis, lateral view. Scale: 0.1 mm (4–6, 9, 12, 13), 0.2 mm (3, 7, 11), 0.5 mm (2, 10), 1.0 mm (1, 8); x 120 (14, 15).

Рис. 1–15. *Gastrallus erdosi* sp.n.: 1 — вид жука сверху; 2 — лоб и глаза; 3 — усик ♂; 4 — усик ♀; 5 — грануляция на продольном горбике переднеспинки; 6 — то же на боку переднеспинки; 7 — переднеспинка, показан рисунок опушения; 8 — вид тела сбоку; 9 — грануляция на диске надкрыльев; 10 — надкрылье; 11 — средне- и заднегрудь; 12 — грануляция на заднегрудь; 13 — голень и лапка задней ноги; 14 — эдеагус (вид со спинной стороны); 15 — конец пениса, вид сбоку. Масштаб: 0,1 мм (4–6, 9, 12, 13), 0,2 мм (3, 7, 11), 0,5 мм (2, 10), 1,0 мм (1, 8); x 120 (14, 15).

side of the middle above base (Fig. 7); pattern of bristling hairs is shown on the figure by more intensive colouring. Sharp lateral edge not reaches anterior margin as far as one-third of the whole length of side; sides bulging (Fig. 8).

Scutellum obtriangular with rounded apex.

Elytra 2 times as long as wide near declive and 2.7 times longer than pronotum, slightly widened to declive. Sides with one distinct lateral stria and with 2–3 striae above hardly marked with punctures (Fig. 8). Elytral disk with translucent puncture striae. Surface covered with flat granules separated

by 1–2 their diameters (Fig. 9). Pubescence directed to apical end all over (Fig. 10).

Thoracic sternites. Mesocoxae separated by about a half of coxa diameter (a bit shorter) (Fig. 11). Middle of metasternum strongly convex; distal median groove hardly reaching middle of the metasternum (Fig. 11). Surface covered with small, flat granules arranged in unclear oblique rows and separated by 1–3 their diameters (Fig. 12).

Legs thin. Metatarsi 0.6 times as long as tibiae; 1st segment of metatarsi 2 times as long as the 2nd one; the latter 1.3 times

as long as the 3rd one, 3rd and 4th segment nearly of equal length, but 4th segment emarginate on dorsal surface; 2nd and 5th segment of equal length (Fig. 13).

Abdomen. 1st and 2nd sternites merging. Aedeagus: parameres with no sensitive lateral outgrowth; each paramere with 3 short lobes in the middle of its inner side, and the lower lobe looks like transversal scapula (Fig. 14). End of penis turned up as broad triangle and bulged at the end as viewed from side (Fig. 15).

Length 2.4–2.8 mm, width 0.9–1.1 mm.

DIAGNOSIS. New species is very close to *Gastrallus corsicus* Schilsky, 1898, and differs from it by following characters: elytra with pubescence all over directed to apex (pubescence directed obliquely from elytral suture in *G. corsicus*); pronotum with one transversal depression on either side of the middle above base (pronotum with 2 pairs of depressions above base in *G. corsicus*); surface of metasternum covered with granules separated by 1–3 their diameters (surface of metasternum with dense granulation in *G. corsicus*); apex of the penis turned up and bulged as viewed from side (apex of the penis turned up with no bulging at the end in *G. corsicus*).

ETYMOLOGY. This species is named in honour of Dr. J. Erdős who picked up beetles of this species.

Gastrallus ornatulus sp.n.

Figs 16–29.

MATERIAL. Holotype: Krasnodar Prov., Severskiy Distr., Ubinskoe Forestry, 28.VI[19]72 (Nikitskiy). 2 Paratypes: 1st spec. 2.VII[19]73 (Nikitskiy); 2nd spec. 26.VII.1976 (Belov). *Gastrallus immarginatus* Müll. Other specimens: Azerbaijan, Lenkoran' Distr., Alekseevka, 18.VII.1978 (Mikhechev, Nikitskiy). On UF light; Azerbaijan, Lenkoran' Distr., 15 km at road Alekseevka–Bilyasar, 12.VII.1978 (Mikhechev, Nikitskiy). ZMUM.

DESCRIPTION. General view. Head, pronotum (except the apical middle with elevation) black-brown, elytra, abdomen, legs and antennae brown; or the whole beetle from brown to dark-brown. Pubescence yellowish-silvery, fine, dense, appressed, forming loop-like pattern on pronotum. Body 2.9 times (Krasnodar. Prov.) — 2.8 times (Azerbaijan) as long as wide (Figs 16, 17).

Head. Frons not strongly convex, with small elevation or carina between eyes. Pubescence sometimes forming V-shaped pattern (Fig. 18). Clypeus with curved basal and apical margins; frons with small fossa on each side above clypeus (Fig. 19). Eyes slightly convex, irregularly oval, slightly emarginate for base of antenna, separated by 1.1 (♂) — 1.3 (♀) vertical eye diameters. Antennae of 10 segments; 5th and 7th segment very small, nearly of equal length and width; 2nd, 3rd, 4th and 6th segments oblong, 4th and 6th segment with small tooth, jut out inside. Club segments rather broad (last segment being lost) (Fig. 20, paratype). Last segment of maxillary palpi 2.5 times as long as wide, broadening to the middle and conically narrowing to the top, with transversal crown of few chaetae on the widest part, and its apical half with longitudinal rows of chaetae (Fig. 21, paratype).

Pronotum 1.1 times as wide as long, i.e. a bit transversal. Posterior angles very narrowly flattened, obtuse, rounded. Sharp lateral edge not reaches anterior margin as far as one-third or quarter of the whole length of side (Fig. 22). Upper surface with fine, low granules, separated by 1–2 their diameters (Fig. 23); granules flattened on sides (Fig. 24). Apical half elevated in the middle and ends on the forepart by high tubercle, covered with more high granules. Middle of pronotum is elevated in an obtriangular form which is limited by pair of oblique transversal depressions from below and by pair

of round depressions from above. Bristling hairs forming loop-like pattern on the more convex contours (Fig. 25).

Scutellum semicircular, nearly transversal.

Elytra 2.1–2.2 times as long as wide and 2.8 (Krasnodar Prov.) — 2.7 (Azerbaijan) times longer than pronotum, slightly compressed laterally in the middle. Sides with 1 clear lateral stria and 2–3 puncture rows above. Elytral surface with delicate structure, covered with unclear flattened granules, and with sparse, weak costae. Pubescence directed out from the suture on basal half of disk (Fig. 16, 17).

Thoracic sternites. Mesocoxae separated by about 0.5 coxa diameter. Metasternum moderately convex; distal median groove not reaches the centre of it (Fig. 26). Surface with delicate dense granularity (Fig. 27).

Legs. Metatarsi about 0.75 times as long as tibiae; 1st segment of metatarsi 2.2 times as long as the 2nd one, 2nd segment 1.3 times as long as the 3rd one, 3rd segment 1.5 times longer than the 4th one, 2nd and 5th segment of equal length (Fig. 28).

Abdomen. Suture between 1st and 2nd sternites slightly visible along the whole length of suture. Aedeagus (paratype): parameres of complex form, short and broad outside part with short sensitive outgrowth, inside part consists of long lobe which is bifurcated till the base into broad and narrow parts; penis with longitudinal costa on distal sclerotized part (dorsal view) (Fig. 29).

Length 2.2–3.1 mm, width 0.75–1.1 mm.

DIAGNOSIS. New species is the most close to *Gastrallus immarginatus* (Müller, 1821), but differs well from the latter by short, almost transversal 5th and 7th antennal segments, by original pubescence on pronotum and elytra, and also by aedeagus, whose parameres have short lateral sensitive outgrowth (long in *G. immarginatus*), their inner lobes of different thickness (of nearly equal thickness in *G. immarginatus* [Español, 1963, Figs 5,6]), and penis with longitudinal costa on distal part (simple end of penis in *G. immarginatus* [Español, ibid.]).

After studying the holotype of *Gastrallus rollei* Reitter, 1912, I believe it to be a valid species and give more detailed description.

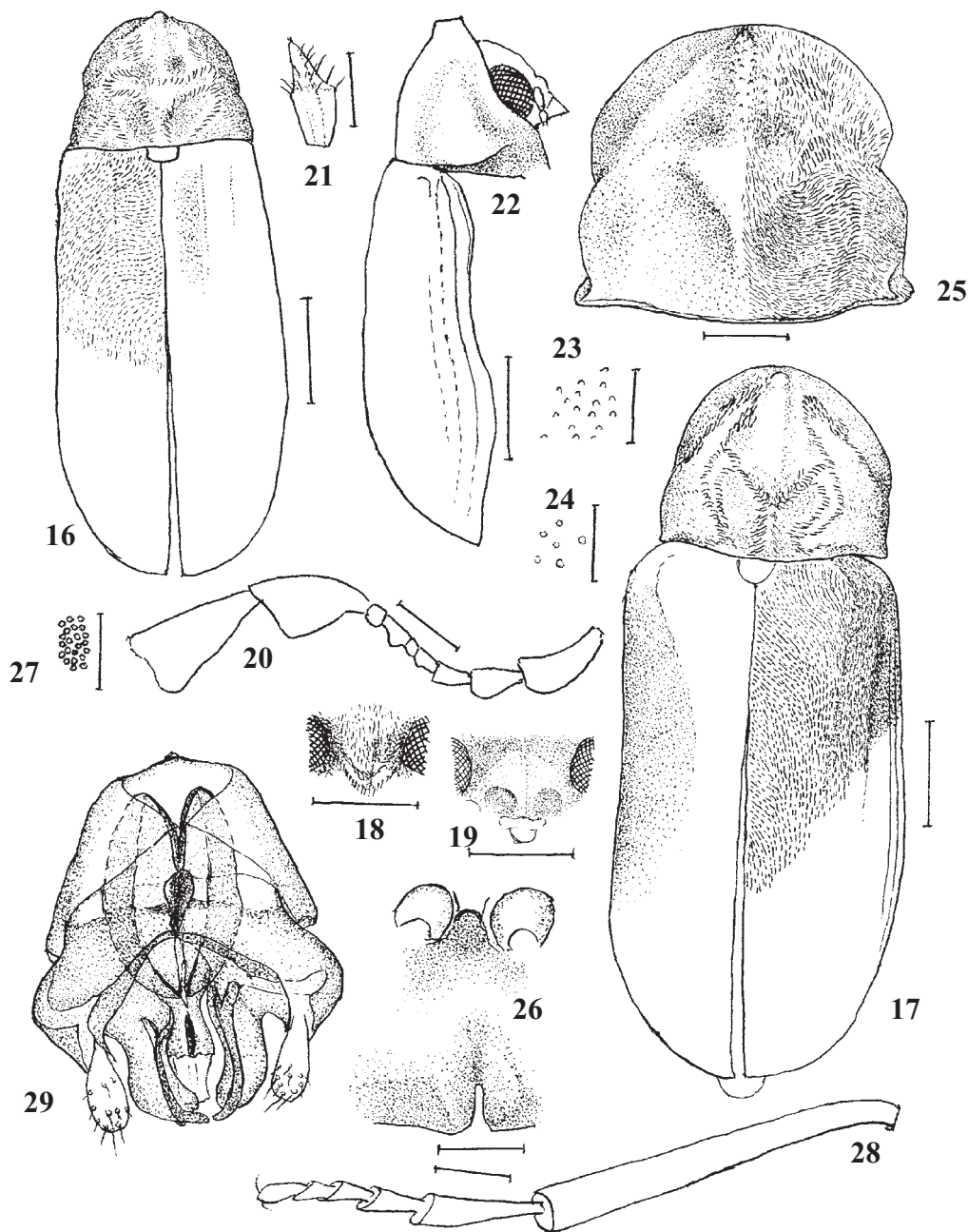
Gastrallus rollei Reitter, 1912

Figs 30–38.

MATERIAL. Holotypus 1912, *Gastrallus rollei* Reitter. Museum Peruvia n. Barcelona. Coll. Reitter. HMNH.

DESCRIPTION (from holotype). General view. Pronotum, head, 1st antennal segment, and legs reddish-brown, elytra and abdomen yellowish-brown, metasternum dark-brown, antennae (except 1st segment) pale-yellow. Pubescence greyish-yellowish, shining on elytra, very fine, not dense, appressed (except pronotum). Body 2.8 times as long as wide (Fig. 30).

Head. Frons transversally convex between eyes, and projects as a peak of a cap above clypeus (Fig. 31). Eyes of irregular form, their upper two-third convex and narrowed, lower part almost flat. Front margin a little emarginate in place of antennae insertions. Eyes separated by nearly 1.5 vertical eye diameters. Antennae: 2nd segment rounded with narrow base, 3rd segment small, narrow, 4th–7th segment with obtuse tooth inside, from them the 5th segment noticeably larger than the rest, and 6th segment very small. Club: 8th segment 2 times as long as wide and nearly equals to the length of 3rd–6th segment combined, 9th segment significantly narrower than the 8th one, and 3 times as long as wide; 10th segment lost (Fig. 32).



Figs 16–29. *Gastrallus ornatulus* sp.n.: 16 — general view (Krasnodar); 17 — the same (Azerbaijan); 18 — pubescence pattern on frons; 19 — frons; 20 — antenna; 21 — last segment of maxillary palpi; 22 — body, lateral view; 23 — granulation in the middle of pronotal disk; 24 — granulation on pronotal side; 25 — pronotum; 26 — meso- and metasternum; 27 — granulation on metasternum; 28 — hind tibia and tarsus; 29 — aedeagus. Scale: 0.1 mm (20, 21, 23, 24, 27, 28), 0.2 mm (25, 26), 0.5 mm (16–19, 22); x 120 (29).

Рис. 16–29. *Gastrallus ornatulus* sp.n.: 16 — вид жука сверху (Краснодар); 17 — то же (Азербайджан); 18 — рисунок опушения лба; 19 — лоб; 20 — усик; 21 — последний членик челюстного щупика; 22 — вид тела сбоку; 23 — грануляция на середине диска переднеспинки; 24 — грануляция на боку переднеспинки; 25 — переднеспинка; 26 — средне- и заднегрудь; 27 — грануляция на заднегрудь; 28 — голень и лапка задней ноги; 29 — эдеагус. Масштаб: 0,1 мм (20, 21, 23, 24, 27, 28), 0,2 мм (25, 26), 0,5 мм (16–19, 22); x 120 (29).

Pronotum slightly transverse, as wide as elytra. Posterior angles strongly rounded. Sharp lateral edge does not reach the anterior margin as far as one-third of the whole side length. Sides slightly bulging (Fig. 33). Apical half without longitudinal elevation but the centre is elevated broadly and covered with dispersed high granules (Fig. 34). Pubescence raised, directed forward, sides covered with small, nearly flat granules (Fig. 35). Margin of base rimmed; basal part of pronotum

with distinct longitudinal carina, extended from central elevation to base, and with weak oval longitudinal depression on either side from carina, this depressions being outlined by silver hairs at some distance from their contour (Fig. 36).

Scutellum obtriangular, not stretched.

Elytra 2 times as long as wide (near shoulders) and 2.4 times longer than pronotum. Sides with 1 clear stria and 2 weak striae marked by punctures, interspaces slightly convex.

Elytral disk with slight traces of striae, without costae; pubescence directed to elytral apex (Fig. 37). Structure of surface more or less homogenous, very fine, without granules.

Thoracic sternites. Mesocoxae very close to each other, separated by no more than one quarter of coxa diameter (Fig. 38). Metasternum moderately convex in the middle, distal median groove does not reach the centre of metasternum. Surface structure fine, nearly wrinkled.

Legs. Tarsi absent.

Length 2.5 mm, width 0.9 mm.

DIAGNOSIS. This species differs from other Eurasian Palearctic *Gastrallus* by long body, distinct longitudinal carina above pronotal base, increased 5th and very small 6th antennal segment, and also by mesocoxae very close to each other.

KEY TO EURASIAN PALAEARCTIC SPECIES OF THE GENUS *GASTRALLUS* (WITHOUT JAPANESE SPECIES)

1(2). Apical margin of pronotum elongated forward and curved down, and with feeble round tubercle on its middle; sharp lateral edge reaches the middle of side only. Elytra with two distinct lateral striae. Aedeagus: each paramere with 1 thin outgrowth inside, penis with short sclerotized part. Length 4.4 mm. Aral sea coast
 *G. insuetus* Logvinovskij, 1978

2(1). Apical margin of pronotum not elongated forward and not curved down.

3(6). Elytra short: not longer than 1.7 times as wide.

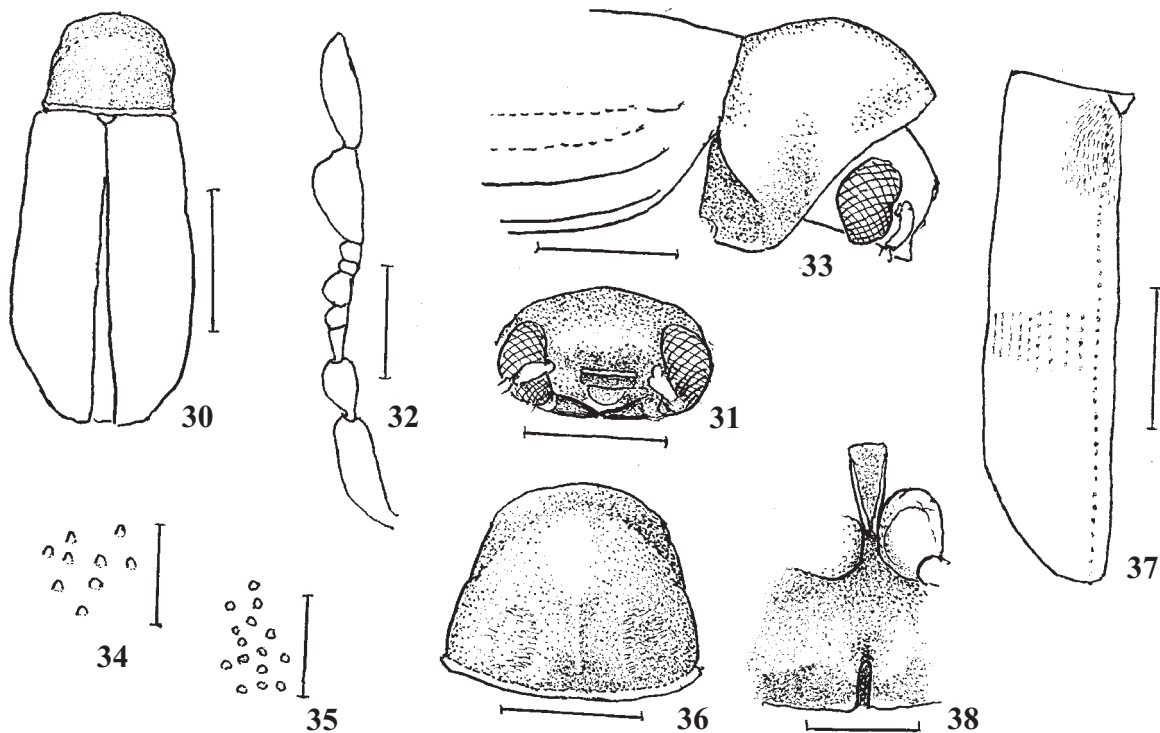
4(5). Elytra 1.5 times as long as wide, with visible striae of dark points all over the disk. 3 lateral striae deeper than the others. Antennal 4th and 6th segments transverse, 10th segment 3 times as long as wide. Surface with no rough granules. Aedeagus: each paramere with 2 very long and slender outgrowths [Zahradnik, 1996, Figs c,d]. Brown, pubescence golden-yellow. Length 2.2–2.9 mm, width 0.9–1.3 mm. Central Europe, France
 *G. knizeki* Zahradnik, 1996

5(4). Elytra 1.7 times as long as wide, their sides with 2 almost complete lateral striae. Elytral surface tiny wrinkled. Apical half of pronotum with short pubescence, basal part covered with long, silk, wavy, disposed transversely hairs. Pronotum with no posterior angles. Beetles black, tibiae brick-red, antennae and tarsi yellow-brown. Length 2.4–2.8. Armenia
 *G. phloeophagus* Khnzorian, 1960

6(3). Elytra not less than 1.9 times as long as wide.

7(16). Apical middle of pronotum noticeably elevated and with higher and larger granules on it.

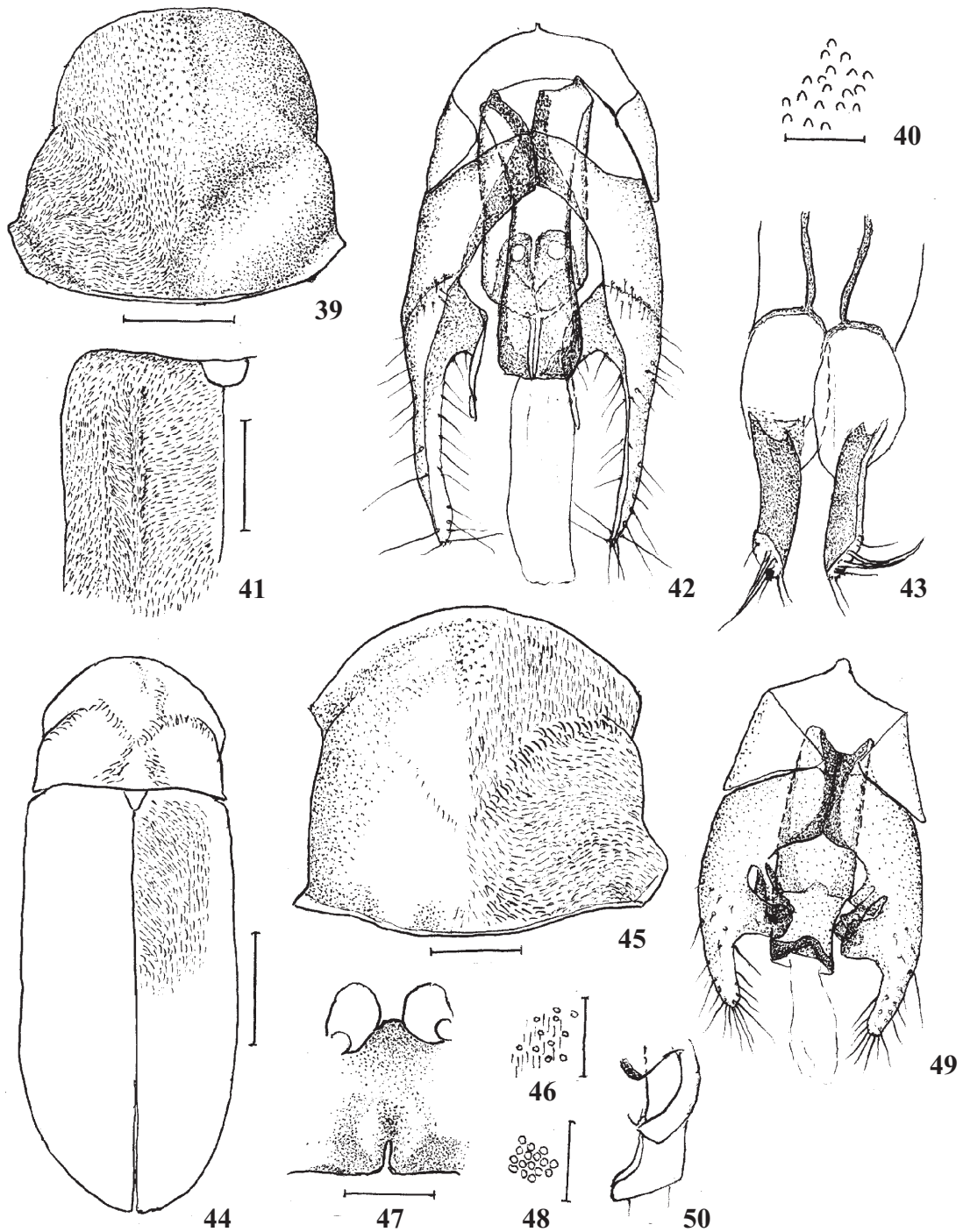
8(15). Pubescence directed out from suture on basal half or third of elytral surface.



Figs 30–38. *Gastrallus rollei* Reitter: 30 — general view; 31 — frons; 32 — antenna; 33 — fore part of body, lateral view; 34 — granulation on the middle of apical half of pronotum; 35 — the same on pronotal side; 36 — pronotum; 37 — elytron; 38 — meso- and metasternum. Scale: 0.1 mm (34, 35), 0.2 mm (32, 38), 0.5 mm (31, 33, 36, 37), 1 mm (30).

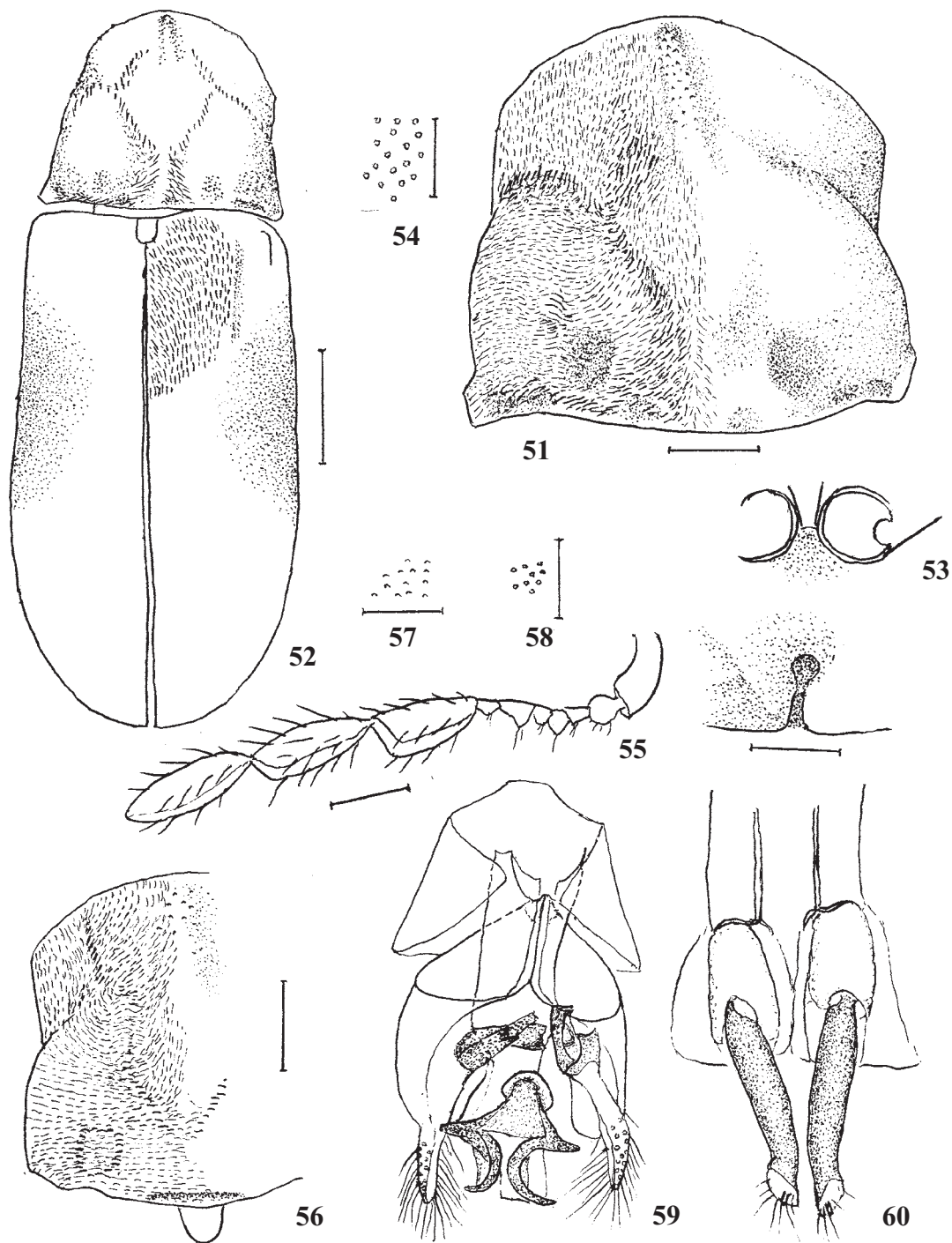
Рис. 30–38. *Gastrallus rollei* Reitter: 30 — вид жука сверху; 31 — лоб; 32 — усик; 33 — передняя часть тела, вид сбоку; 34 — грануляция на середине апикальной половины переднеспинки; 35 — то же на боку переднеспинки; 36 — переднеспинка; 37 — надкрылье; 38 — средне- и заднегрудь. Масштаб: 0,1 мм (34, 35), 0,2 мм (32, 38), 0,5 мм (31, 33, 36, 37), 1 мм (30).

- 9(12). Transversal pubescence on elytral disk expanding broadly, till half of elytral length, and limited laterally by costa.
- 10(11). Posterior angles of pronotum almost not flattened. Pronotal apical elevated middle with high granules and with marked tubercle in front of it. Pronotal sides with flat granules. Pubescence on pronotum forming elegant loop-like pattern. Pronotal disk with two pairs of depressions: lower oblique and upper rounded, these depressions separating the median obtriangular convexity of disk. Frons with carina and two rounded depressions above clypeus margin; pubescence sometimes forming here V-shaped figure. Pubescence directed only out from suture on basal part of elytral disk. Aedeagus: each paramere on inner side with long outgrowth of complicated form — divided into broad and narrow lobes, and outside with comparatively short sensitive outgrowth; distal sclerotized part of penis narrowed and with high longitudinal costa. Beetles dark-brown or brown except more light ends of limbs; often pronotum blackish, and field around tubercle reddish. Length 2.2–3.1 mm, width 0.75–1.1 mm. The Caucasus, the Transcaucasus *G. ornatulus* sp.n.
- 11(10). Posterior angles of pronotum distinctly flattened (Fig. 39). Pronotal apical elevated middle without tubercle in front of it. Disk with rather high granules (Fig. 40), pronotal sides with less high granules. On basal quarter of elytra pubescence directed from the suture till first costa almost transversely; and pubescence directed to suture on next interspace i.e. from the 2nd costa to the 1st one (Fig. 41). Aedeagus: each paramere with only thin inner lobe, end of penis spade-shaped (Fig. 42). Pseudopositor: coxites 5 times as long as wide, their basal parts curved outside, their apices obliquely cut and each with 2 thick, long chaetae; stiles tiny, with 1 long chaeta (Fig. 43). Beetles from dark- till yellowish-brown, antennae and tarsi yellow. Length 2.5–3.9 mm, width 0.9–1.35 mm. East Mediterranean, North Africa *G. pubens* Fairmaire, 1875
- 12(9). Area with oblique pubescence on elytral basal part narrower, not reaches costa, and often occupies interspace near suture expanding nearly till declivity (Fig. 44).
- 13(14). Pronotal posterior angles not flattened or feebly flattened; pronotal base with 2 pairs of depression above it (Fig. 45). Elytral surface with small, convex granules separated by 1–2 their diameters on the basal part of elytra (46). Mesocoxae separated by no less than 0.5 coxa diameter (Fig. 47). Metasternum strongly and strictly convex in the middle; its surface with fine, dense, homogenous granules (Fig. 48). Distal median groove short and straight. Aedeagus: each paramere with 3 short lobes on inner side; outside sensitive outgrowth nearly 1.5 times as long as lower inner lobe (Fig. 49); end of penis looks as high-boot with no apex bulging (Fig. 50). Beetles brown; antennae, ends of mouth palpi, and tarsi yellow. Upside being usually covered with dense silver pubescence. Length 2.0–3.3 mm, width 0.75–1.2 mm. Mediterranean over all *G. corsicus* Schilsky, 1898
- 14(13). Pronotal posterior angles narrowly but clearly flattened. A feeble and small depression is disposed nearly at each side of middle above base and more large one is disposed some higher and farther; two little depressions are arranged farther along base near posterior angle (Fig. 51). Elytral surface with unclear fine structure. Place with oblique pubescence, arranged near scutellum, small and hardly visible (Fig. 52). Mesocoxae separated by less than 0.5 coxa diameter (Fig. 53). Surface of metasternum with puncturation, punctures separated by 1–3 puncture diameters (mostly 2 diameters) (Fig. 54). Distal median groove ends with round delatation. Aedeagus: each paramere inside with long lobe divided in two parts of more or less equal width; outside sensitive outgrowth more long than inside lobes [Español, 1963, Figs 5, 6]. Beetles dark-castaneus, unicolor, tarsi brown. Length 2.2–3.2 mm. West Europe, the Crimea *G. immarginatus* (Müller, 1821)
- 15(8). Pubescence on elytral disk directed to elytral apex everywhere. Apical convex middle part of pronotum with no distinct tubercle from the front, but looks like longitudinal elevation-ridge, covered with high, sharp granules and compressed laterally. Pronotal posterior angles narrowly flattened; pronotum with broad transverse depression on each side from the middle above base. Elytra 2 times as long as wide; their surface covered with small flat granules. Distance between mesocoxae a bit shorter than a half of coxa diameter. Surface of metasternum with fine, flat granules, separated by 1–3 their diameters. Aedeagus: each paramere inside with 3 short lobes, outside sensitive outgrowth about 2 times as long as inner lower lobe; end of penis turned up and bulging (Fig.). Dark-brown with silky shine, antennae and tarsi yellowish. Length 2.4–2.8 mm, width 0.9–1.1 mm. Izrael *G. erdosi* sp.n.
- 16(7). Apical middle of pronotum hardly or not convex.
- 17(20). Antennal 4th and 6th segments larger or more projected inwards than their neighbouring ones.
- 18(19). Antennal 7th segment nearly as long as wide, 8th segment 2 times as long as wide, 10th segment 3 times as long as wide; 4th segment transversal, 6th one longitudinal (Fig. 55). Apical median part of pronotum hardly elevated (Fig. 56) and covered with very small granules (Fig. 57), the sides with almost flatted granules (Fig. 58). Eyes nearly flat, separated by 0.9 (♂)–1.3 (♀) vertical eye diameter. Elytra 1.9–2 times as long as wide. Aedeagus: each paramere inside with 2 short lobes; penis with acuminate horizontal projects on each side (Fig. 59). Pseudopositor: coxites 9 times as long as wide, their ends sloped and turned out. Stiles tiny, look as delicate stick on upper third of coxite slope (Fig. 60). Brown, antennae and mouth palpi light brown. Length 2.3–3.0 mm, width 0.85–1.1 mm. Middle and South Europe, East Mediterranean, Japan *G. laevigatus* (Olivier, 1790)
- 19(18). Antennal 7th segment clearly longitudinal, 8th segment 2.7 times as long as wide, 10th segment 5 times as long as wide, 4th and 6th segment longitudinal [Español, 1963, Fig.10]. Pronotum with no tubercle or with very weak elevation. Surface finely-netted. Aedeagus: each paramere inside with 3 short outgrowths, penis with no sharp horizontal project on each side [Español, 1963, Fig.14]. Reddish-castaneum, pubescence dust-like, yellowish. Length 2–3 mm. Spain (Andalusie), Morocco *G. kocheri* Español, 1963
- 20(17). Antennal 5th segment larger and more projected inwards than neighbouring ones; 6th segment very small. Apical median part of pronotum with no elevation, but covered with higher and larger granules than on the rest of surface. Pronotum with distinct longitudinal carina above the base. Eyes separated by 1.5 vertical eye diameters. Elytra 2.2 times as long as wide. Middle coxae separated by less than 0.25 their diameter. Beetle reddish-brown, elytra and abdomen yellowish-brown, antennae yellow. Length 2.5 mm, width 0.9 mm. Spain *G. rollei* Reitter, 1912



Figs 39–50. *Gastrallus* spp.: 39–43 — *Gastrallus pubens* Fairmaire, pronotum (39), granulation on pronotal disk (40), fore part of elytron with pubescence pattern (41), aedeagus, dorsal view (42), end of pseudopositor (43); 44–50 — *Gastrallus corsicus* Schilsky, general view (with pubescence patterns) (44), pronotum (with pubescence pattern) (45), granulation on basal part of elytra (46), meso- and metasternum (47), granulation on metasternum (48), aedeagus, dorsal view (49), end of penis, lateral view (50). Scale: 0.1 mm (40, 46, 48), 0.2 mm (45, 47), 0.5 mm (39, 41, 44); x 120 (42, 43, 49, 50).

Рис. 39–50. *Gastrallus* spp.: 39–43 — *Gastrallus pubens* Fairmaire, переднеспинка (39), грануляция на диске переднеспинки (40), передняя часть надкрыльев с рисунком опушения (41), эдеагус (вид со спинной раны) (42), конец ложного яйцевода (43); 44–50 — *Gastrallus corsicus* Schilsky, вид жука сверху (с рисунками опушения) (44), переднеспинка (с рисунком опушения) (45), грануляция в базальной части надкрыльев (46), средне- и заднегрудь (47), грануляция на заднегрудь (48), эдеагус (вид со спинной стороны) (49), конец пениса, вид сбоку. (50). Масштаб: 0,1 мм (40, 46, 48), 0,2 мм (45, 47), 0,5 мм (39, 41, 44); x 120 (42, 43, 49, 50).



Figs 51–60. *Gastrallus* spp.: 51–54 — *Gastrallus immarginatus* (Müller), pronotum with pubescence pattern (51), general view and pubescence pattern on elytra (52), meso- and metasternum (53), puncturation of surface of metasternum (54); 55–60: *Gastrallus laevigatus* (Olivier), antenna (55), a half of pronotum (with pubescence pattern) (56), granulation on the middle of disk of pronotum (57), the same on pronotal side (58), aedeagus (59), end of pseudopositor (60). Scale: 0.1 mm (54, 55, 57, 58), 0.2 mm (51, 53, 56), 0.5 mm (52); x 120 (59, 60).

Рис. 51–60. *Gastrallus* spp.: 51–54 — *Gastrallus immarginatus* (Müller), переднеспинка с рисунком опушения (51), вид жука сверху с рисунком опушения на надкрыльях (52), средне- и заднегрудь (53), пунктировка поверхности заднегрудки (54); 55–60: *Gastrallus laevigatus* (Olivier), усик (55), половина переднеспинки с рисунком опушения (56), грануляция на середине диска переднеспинки (57), то же на боку переднеспинки (58), эдеагус (59), конец ложного яйцеклада (60). Масштаб: 0,1 мм (54, 55, 57, 58), 0,2 мм (51, 53, 56), 0,5 мм (52); x 120 (59, 60).

Genus *Falsogastrallus* Pic, 1914*Falsogastrallus curtus* sp.n.

Figs 61–69.

MATERIAL. Holotype: O. Jordan, Amman, 800 m. 15.6.1956 (J. Kloppech). Auf Walnusstamm laufend. HMNH.

DESCRIPTION. General view. Head, pronotum and lower side reddish-brown, elytra blackish-brown, antennae and tarsi dark-yellow. Pubescence very tiny, appressed, dark-grey. Body 2 times as long as wide (Fig. 61).

Head. Frons convex. Eyes convex, irregularly oval, broadly separated, i.e. not less than by 2 vertical eye diameters. Antennae of 9 segments, all segments longitudinal; 2nd segment round-elongated, 3rd segment very thin, 4th–6th segment with small tooth inside, 4th segment the biggest. 7th and 8th club segments wide, nearly of equal length, 7th segment nearly 2 times and 8th segment 2 times as long as wide, 9th segment 3,5 times as long as wide (Fig. 62).

Pronotum 1.2 times as long as wide, nearly as wide as elytra, evenly convex, with no bulging on sides, basal margin rimmed. Posterior angles clear, obtuse, flattened. Sharp lateral edge reaches nearly two-thirds of side (Fig. 63). Surface with very delicate structure, weakly punctured, punctures separated by 2–3 puncture diameters on disk (Fig. 64).

Scutellum obtriangular.

Elytra 1.6 times as long as wide and 2 times longer than pronotum; elytra very slightly widening to declivity. Lateral stria distinct, 1–2 unclear puncture rows above does not form striae (Fig. 63). Surface with rather large, weak, sparse punctures, arranged in unclear rows. Surface structure between punctures

with small but roughish reticulation, nearly granular, and marked more roughly than on pronotum. Hairs of pubescence usually shorter, than distance between punctures (Fig. 65).

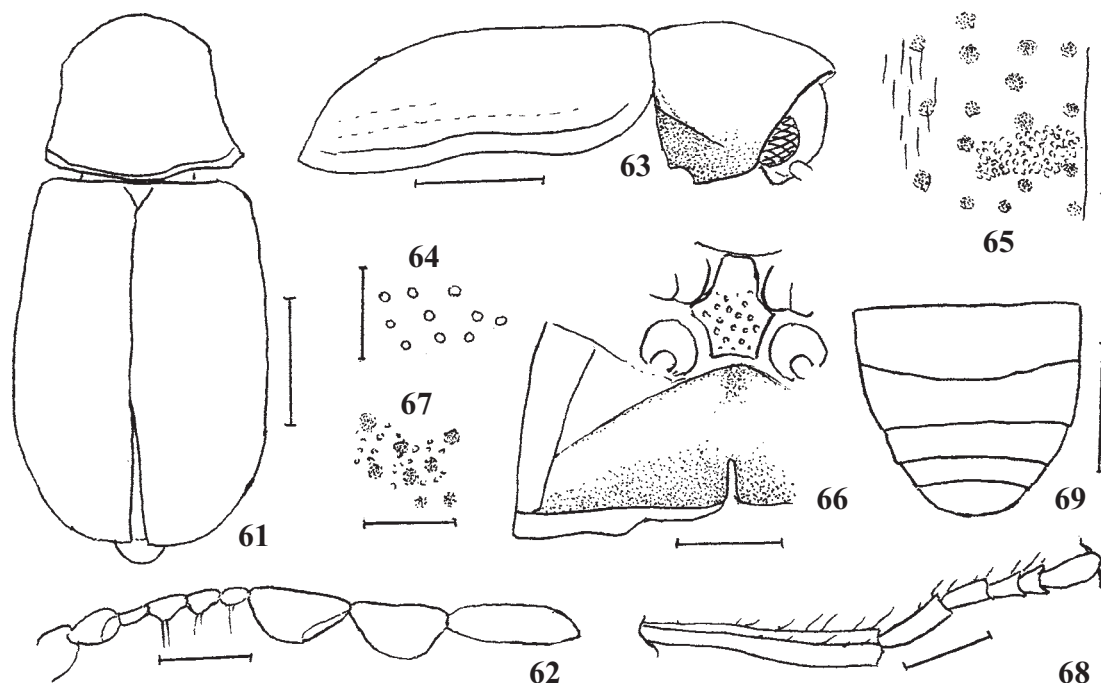
Thoracic sternites. Median plate separates mesocoxae by a little wider than the coxa diameter; surface of the plate with large punctures. Metasternum with short distal median groove which not reaches the centre of metasternum. Basal margin with triangular depression in its centre; thin arcuate fold passes obliquely from basal margin to side through each half of metasternum (Fig. 66). Surface structure fine, unclear, with indistinct, more large, sparse punctures (Fig. 67).

Legs. Tarsi thin, long. Metatarsi and metatibiae nearly of the same length. 1st segment of metatarsus 1.5 times as long as the 2nd one, 2nd segment also 1.5 times longer than the 3rd one as well as 3rd segment 1.5 times longer than the 4th one; 5th segment 1.3 times as long as the 2nd one and a little shorter than the 1st segment (Fig. 68).

Abdomen. First suture evenly curved backward (Fig. 69).

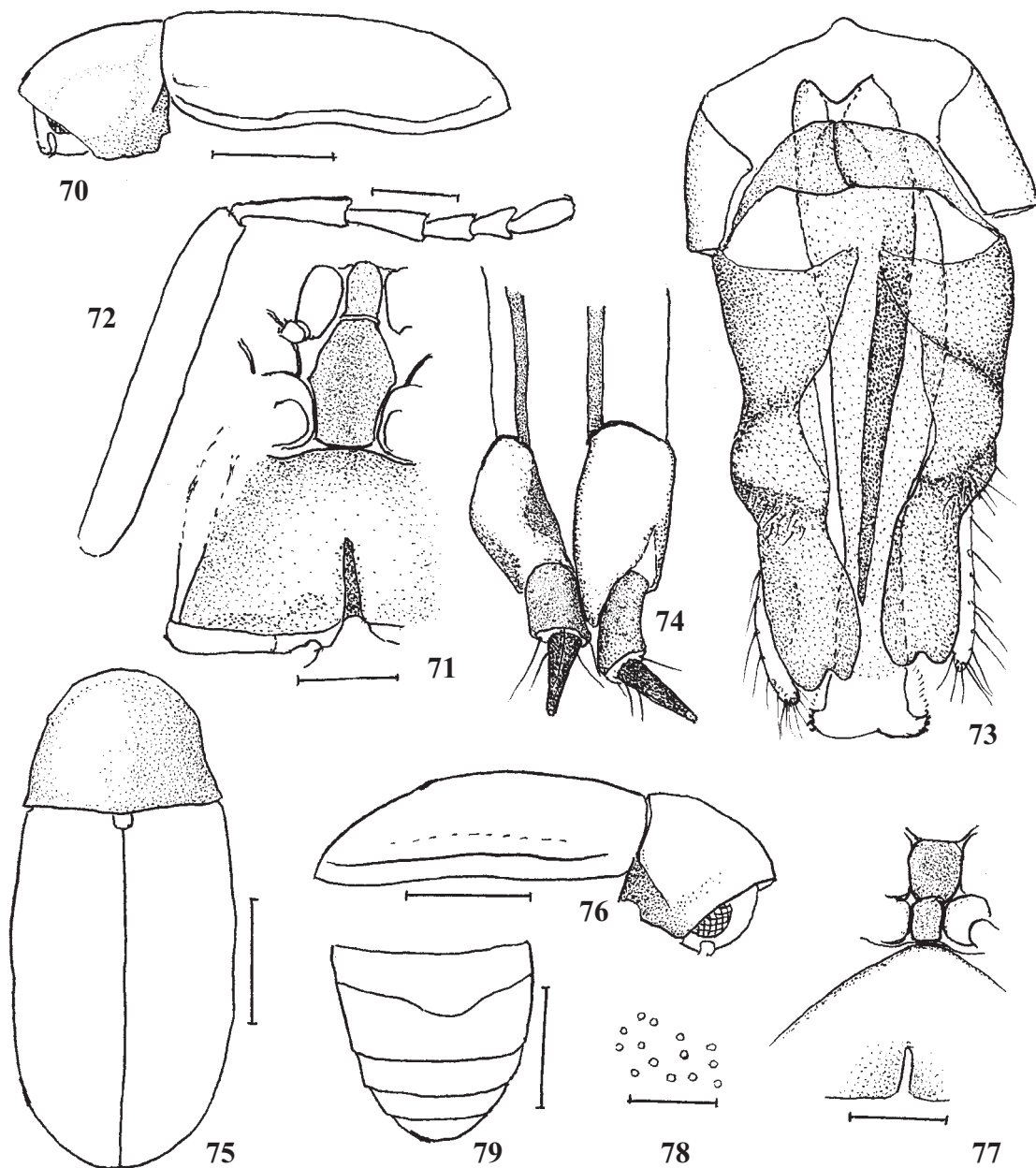
Length 2 mm, width 1 mm.

DIAGNOSIS. New species is close to *Falsogastrallus unistriatus* (Zoufal, 1897), but it differs from the latter by shorter body, by steeper declivity of elytra, by blackish colour of elytra and reddish pronotum (upper side unicolourly dark-brown in *F. unistriatus*), by distance between mesocoxae, which is wider than their diameter (this distance narrower than coxa diameter in *F. unistriatus*); at last, the 1st abdominal suture evenly curved backwards (middle part of 1st abdominal suture curved backwards stronger in *F. unistriatus*). Also there are differences in forms of antennal segments, tarsi, in structures of surface.



Figs 61–69. *Falsogastrallus curtus* sp.n.: 61 — general outline; 62 — antenna; 63 — body, lateral view; 64 — punctation on disk of pronotum; 65 — elytral structure of surface; 66 — meso- and metasternum; 67 — structure of surface of metasternum; 68 — hind tibia and tarsus; 69 — abdomen. Scale: 0.1 mm (62, 64, 65, 67, 68), 0.2 mm (66), 0.5 mm (61, 63, 69).

Рис. 61–69. *Falsogastrallus curtus* sp.n.: 61 — контур тела; 62 — усик; 63 — вид тела сбоку; 64 — пунктировка на диске переднеспинки; 65 — структура поверхности надкрыльев; 66 — средне- и заднегрудь; 67 — структура поверхности заднегрудь; 68 — голень и лапка задней ноги; 69 — брюшко. Масштаб: 0,1 мм (62, 64, 65, 67, 68), 0,2 мм (66), 0,5 мм (61, 63, 69).



Figs 70–79. *Falsoastrallus* spp: 70–74 — *Falsoastrallus skopini* Español, body, lateral view (70), pro-, meso-, and metasternum (71), hind tibia and tarsus (72), aedeagus (73), end of pseudopositor (74); 75–79 — *Falsoastrallus unistriatus* (Zoufal), general view (75), body, lateral view (76), meso- and metasternum (77), punctation of surface of metasternum (78), abdomen (79). Scale: 0.1 mm (72, 78), 0.2 mm (71, 77), 0.5 mm (70, 75, 76, 79); x 120 (73, 74).

Рис. 70–79. *Falsoastrallus* spp: 70–74 — *Falsoastrallus skopini* Español, вид тела сбоку (70), передне-, средне- и заднегрудь (71), голень и лапка задней ноги (72), эдеагус (73), конец ложного яйцеклада (74); 75–79 — *Falsoastrallus unistriatus* (Zoufal), вид жука сверху (75), вид тела сбоку (76), средне- и заднегрудь (77), пунктировка поверхности заднегрудки (78), брюшко (79). Масштаб: 0,1 мм (72, 78), 0,2 мм (71, 77), 0,5 мм (70, 75, 76, 79); x 120 (73, 74).

KEY TO SPECIES OF THE GENUS *FALSOGASTRALLUS* PIC, 1914, FROM EUROPE AND KAZAKHSTAN

1(2). Sharp lateral edge very short: not reaches the middle of side (Fig. 70). Elytra from 1.6 (♀) to 1.9 (♂) times as long as wide and 2.3 (♀)–2.5 (♂) times longer than pronotum. Structures of surface of pronotum and elytra very fine and differ very little. Distance between mesocoxae not less

than coxa diameter. Metasternum: distal median groove reaches the centre of metasternum (Fig. 71). 5th segment of metatarsus shorter than the long 2nd segment (Fig. 72). Aedeagus and pseudopositor end as shown in Figs. 73, 74. Head and lower side black, upper side reddish-brown, pronotum often blackish, antennae, mouth palpi and legs blackish; shining. Length 1.7–2.6 mm, width 0.7–1.1 mm. Kazakhstan *F.skopini* Español, 1984

- 2(1). Sharp lateral edge goes past the middle of pronotal side. Distal median groove short: not reaches the centre of metasternum. 5th segment of metatarsi longer than the 2nd one.
- 3(4). Elytra 1.7 times as long as wide and 2.25 times as long as pronotum (Fig. 75); their declivity sloping (Fig. 76). Structures of pronotal and elytral surfaces a bit different. Scutellum square. Mesocoxae separated by less than coxa diameter (Fig. 77). Metasternum punctured, punctures separated by 2–3 puncture diameters (Fig. 78). Middle part of the 1st abdominal suture curved backwards stronger, than the rest parts (Fig. 79). Dark-brown, antennae and tarsi dark-yellow. Length 1.85 mm, width 0.8 mm Greece, Syria, Jugoslavia (Dalmatia)* *F. unistriatus* (Zoufal, 1897)
- 4(3). Elytra 1.6 times as long as wide and 2 times as long as pronotum; their declivity steeper. Structure of elytral surface noticeably more rough than the same of pronotum. Scutellum obtriangular. Mesocoxae separated by more than coxa diameter. Surface of metasternum with fine, unclear structure. 1st abdominal suture curved backwards evenly. Head, pronotum, lower side brown, elytra blackish-brown, antennae and tarsi dark-yellow. Length 2 mm, width 1 mm. Jordan *F. curtus* sp.n.

* Logvinovskij [1985] informed that *F. unistriatus* was found in Kazakhstan. This information gives rise to big doubts, *F. skopini* Español being numerous enough in Kazakhstan. Figure of aedeagus from book by Logvinovskij [1985: 95, Fig. 148] belongs most likely to *F. skopini* but not to *F. unistriatus*.

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