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First record of the tribe Adelungiini Baker (Hemiptera: Auchenorrhyncha: Cicadellidae: Megophthalminae) from the United Arab Emirates, with description of a new species

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ABSTRACT

The tribe Adelungiini Baker, with *Platyproctus agraphopteron* Bergevin, 1932, *P. melichari* (Kusnezov, 1929), and *P. emir* sp. nov., collected on *Calligonum crinitum* Boiss. *arabicum* Sosk., is recorded for the first time from the United Arab Emirates. *Symphypyga omani* Kameswara Rao et Ramakrishnan, 1983 and *Assiuta camena* Linnavuori, 1969 are transferred to the genus *Platyproctus* Lindberg, 1925 based on male genitalia structure, with new combinations proposed – *Platyproctus omani* (Kameswara Rao et Ramakrishnan, 1983), comb. nov. and *P. camena* (Linnavuori, 1969), comb. nov. *Platyproctus emir* sp. nov. is closely related to *P. camena* and *P. omani* in general male genitalia structure, but well differs by the aedeagus with denticles on dorsal surface of the shaft and wider pygofer lobes. The genus *Assiuta* Linnavuori 1969 is treated as monotypic Canarian endemic, monophage on *Traganum moquini* Webb ex Moq. *Assiuta salina* is close to *Emelyanogramma proxima* (Dlabola, 1960) by strongly dentate ventral margin of aedeagal shaft. The lectotype is designated for *Symphypyga melichari* Kusnezov, 1929. *Platyproctus flavidus* Dubovsky, 1966 is placed in synonymy under *P. marmoratus* (Horváth, 1894) while *P. maculatus* (Pruthi, 1930) and *Symphypyga melichari fuscopunctata* Kusnezov, 1929 are placed in synonymy under *P. malichari* (Kusnezov, 1929). Illustrations of male genitalia structure for *E. proxima* and the photos of external views for *A. salina* and *P. camena* are given for the first time.

Key words: *Assiuta*, *Emelyanogramma*, lectotype designation, morphology, new combination, new record, new species, new synonymy, *Platyproctus*, systematics

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Первое указание трибы Adelungiini Baker (Hemiptera: Auchenorrhyncha: Cicadellidae: Megophthalminae) из Объединенных Арабских Эмиратов с описанием нового вида

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Резюме

Триба Adelungiini Baker, в составе *Platyproctus agraphopteron* Bergevin, 1932, *P. melichari* (Kusnezov, 1929) и *P. emir* sp. nov., собранных на *Calligonum crinitum* Boiss. *arabicum* Sosk., впервые указана из Объединенных Арабских Эмиратов. *Symphypyga omani* Kameswara Rao et Ramakrishnan, 1983 и *Assiuta camena* Linnavuori, 1969 перенесены в род *Platyproctus* Lindberg, 1925 по признакам строения гениталий самцов, с предложенными новыми комбинациями – *Platyproctus omani* (Kameswara Rao et Ramakrishnan, 1983), comb. nov. и *P. camena* (Linnavuori, 1969), comb. nov. *Platyproctus emir* sp. nov. близок к *P. camena* и *P. omani* по общему строению гениталий самцов, но хорошо отличается наличием зубчиков на

дорсальной поверхности ствола эдеагуса и более широкими долями пигофора. Род *Assiuta* Linnavuori 1969 рассматривается в качестве монотипического эндемика Канарских островов, монофага *Traganum moquini* Webb ex Moq. *Assiuta salina* близок к *Emelyanogramma proxima* (Dlabola, 1960) по наличию крупных зубцов на вентральной поверхности ствола эдеагуса. Обозначен лектотип для *Symphypyga melichari* Kusnezov, 1929. *Platyproctus flavidus* Dubovsky, 1966 сведен в синонимы к *P. marmoratus* (Horváth, 1894), а *P. maculatus* (Pruthi, 1930) и *Symphypyga melichari fuscopunctata* Kusnezov, 1929 сведены в синонимы к *P. malichari* (Kusnezov, 1929). Впервые даны иллюстрации гениталий самцов *E. proxima* и фотографии внешнего вида *A. salina* и *P. camena*.

Ключевые слова: *Assiuta*, *Emelyanogramma*, обозначение лектотипа, морфология, новая комбинация, новое указание, новый вид, новый синоним, *Platyproctus*, систематика

INTRODUCTION

The leafhopper tribe Adelungiini Baker, 1915 is distributed in arid and semiarid areas of the Palaearctic Region including Middle and Central Asia and northeast of Indian subcontinent (Thar desert), Anatolia, Israel, Transcaucasia, northern Africa, and the Canary Islands (Kusnezov 1929; Pruthi 1930; Lindberg 1954; Linnavuori 1962, 1969; Nast 1972; Kameswara Rao and Ramakrishnan 1983; Mitjaev 1971, 2002; Emeljanov 1975; Al-Ne'amy and Linnavuori 1982; Viraktamath 2017; Gnezdilov et al. 2021), however, till now the tribe was almost unknown from the Arabian Peninsula except the record of *Platyproctus agraphopteron* Bergevin, 1932 from "Arabia" by Linnavuori (1969). In April 2010 three species of the genus *Platyproctus* Lindberg, 1925 were collected in sand desert of Sharjah and Abu Dhabi Emirates of the United Arab Emirates on *Calligonum crinitum* Boiss. *arabicum* Sosk. during a field trip to this country under the project "Arthropod fauna of the UAE" directed by Dr. Antonios van Harten (Almada, Portugal). Study of the specimens collected led to description of a new species of the genus *Platyproctus* as well as establishing of new synonyms and new combinations.

MATERIAL AND METHODS

Photographs were taken using Canon EOS 5D Mark IV camera with the lens Canon-MP-E-65 mm f/2,8 1-5x Macro and the flash Canon Macro Twin-Lite MT-26EX-RT. Images were produced using Helicon Focus v. 7.6.4 and Adobe Photoshop CC 2019 software. The genital segments of male specimens studied were macerated in 10% KOH and figured in glycerin jelly (Brunel Micro Ltd, UK) using the Leica MZ 9.5 stereomicroscope with a camera lucida.

The specimens listed below including the type series of the new species described are deposited in the Zoological Institute of the Russian Academy of Sciences, Saint Petersburg, Russia (ZIN). The type specimens examined after the photos are from the Hungarian Natural History Museum, Budapest, Hungary (HNHM) and from the Finnish Museum of Natural History Luomus, Helsinki, Finland (FMNH: http://id.luomus.fi/GV.41537; http://id.luomus.fi/GV.42323).

Label information for old and type material is quoted, with '/' indicating new line and '//' indicating next label.

RESULTS

Family Cicadellidae Latreille, 1802

Subfamily Megophthalminae Kirkaldy, 1906

Tribe Adelungiini Baker, 1915

Subtribe Adelungiina Baker, 1915

Genus *Platyproctus* Lindberg, 1925

Type species: *Platyproctus tesselatus* Lindberg, 1925, by original designation.

***Platyproctus marmoratus* (Horváth, 1894)**
Idiocerus marmoratus Horváth, 1894: 185.
Achrus marmoratus: Dlabola, 1960a: 243, figs 35–42.
Platyproctus marmoratus: Emeljanov, 1975: 389.
Platyproctus flavidus Dubovsky, 1966: 110, fig. 28: 9–12, **syn. nov.**
(Figs 1–5, 46–52)

Material examined. ARMENIA, Vedi: 1 male, 8 May 1957, V.A. Richter leg. (ZIN); 2 males, 2 females, 8 May 1957, V.A. Tryapitsyn leg. (ZIN);

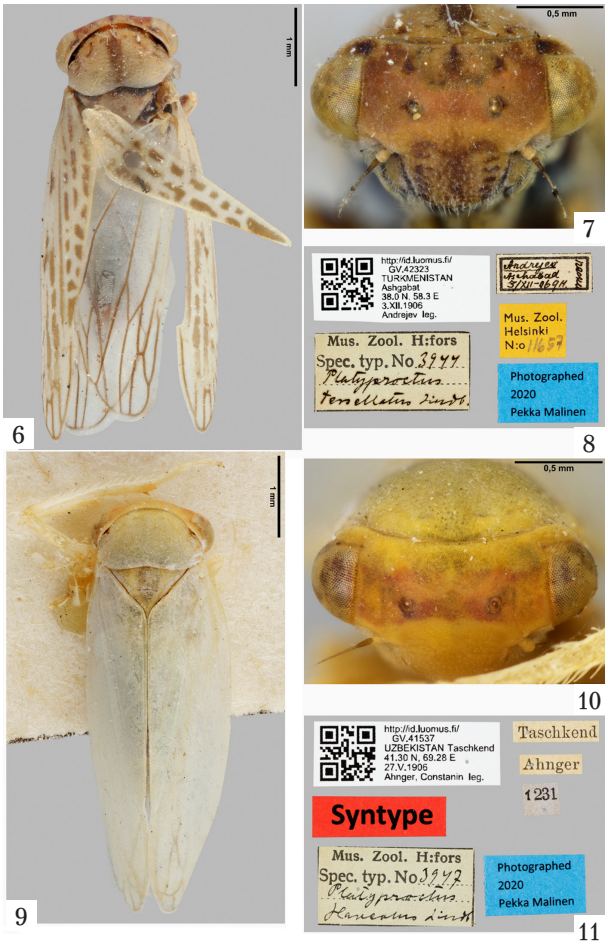
Figs 1–5. *Platyproctus marmoratus* (Horváth, 1894), Armenia, Vedi. 1–3 – male, 4, 5 – female. 1, 4 – dorsal view; 2 – lateral view; 3, 5 – frontal view. Scale bar – 1 mm.

57 males, 41 females, 4 larvae, 1 July 1969, V.A. Richter leg. (ZIN).

Male genitalia (Figs 46–51). Pygofer lobes with short dorsal parts, rounded caudally (Fig. 46, *dp*). Aedeagal shaft smooth, swollen basally (in ventral view) and curved at nearly right angle (in lateral view) (Figs 50, 51), drawn dorso-apically. Gonopore apical. Style with two well developed lobes – long narrow lobe often hook-shaped apically, with subapical tooth and wide and rather long lobe truncate apically, with pair of short teeth one of which situated in opposite to subapical tooth of long lobe or hook-shaped (Figs 47–49).

Female (Fig. 52). Sternite VII with hind margin bilobed medially.

Note. *Platyproctus marmoratus* (Horváth, 1894) was originally described in the genus *Idiocerus* Lewis from Aralich village in southwestern Armenia near Turkish and Iranian borders (Horváth 1894). Almost 70 years later, Dlabola (1960a), revising Horváth's types, illustrated male genitalia of this species based on the type series (3 males and 1 female) and transferred it to the genus *Achrus* Lindberg, 1925, however, later Emeljanov (1975) transferred this species to the genus *Platyproctus* Lindberg, 1925.



Figs 6–11. *Platyproctus* spp. (photos courtesy of Pekka Malinen). 6–8 – *P. tesselatus* Lindberg, 1925, holotype, 9–11 – *P. flaveolus* Lindberg, 1925, syntype. 6, 9 – dorsal view; 7, 10 – frontal view; 8, 11 – labels. Scale bar – 1 mm.

My examination of the specimens collected in Vedi (Armenia) which is close to Aralikh (type locality of *P. marmoratus*), the photos of the type specimens of *Idiocerus marmoratus* Horváth, 1894, deposited in the Hungarian Natural History Museum (Budapest, Hungary), and the photos of *Platyproctus tesselatus* Lindberg, 1925 and *P. flaveolus* Lindberg, 1925 (Figs 6–11), deposited in the Finnish Museum of Natural History Luomus (Helsinki, Finland), as well as comparison of male genitalia drawings provided by Dlabola (1960a, figs 36, 37) for *P. marmoratus*, the drawings by Mitjaev (1971, fig. 28: 3–4) for *P. tesselatus*, and by Dubovsky (1966, fig. 28: 9–12) for *P. flavidus* Dubovsky, 1966 revealed their probable conspecifity. This species is characterized by whitish with brown spots or yellowish green general coloration, with red to dark brown band on vertex (Figs 1–7, 9, 10) and by peculiar two-lobed style, with one truncate lobe and another long and narrow lobe, hook-shaped (spiny) apically (Figs 47–49), and strongly curved, horse-shoe-shaped (in lateral view), aedeagus, drawn dorso-apically (Fig. 51). However final decision on taxonomic status and validity of *P. tesselatus* needs examination of male genitalia structure of any syntype of this species and comparison with those of *P. marmoratus* while *P. flavidus* Dubovsky is apparently a junior synonym of the last.

Platyproctus tesselatus was originally described from Aschabad in Turkmenistan (Lindberg 1925). *Platyproctus flaveolus*, placed in synonymy under *P. tesselatus* by Emeljanov (1975), was described by Lindberg (1925) from Tashkent in Uzbekistan and later recorded from Kazakhstan and northwestern China (Uygur Autonomous Region of Xinjiang) (Mitjaev 1971; Mitjaev and Huang 1995). *Platyproctus flavidus* was described by Dubovsky (1966) from Fergana Valley in Uzbekistan. Thus probably *P. marmoratus* (Horváth) is widely distributed Middle and Central Asian species.

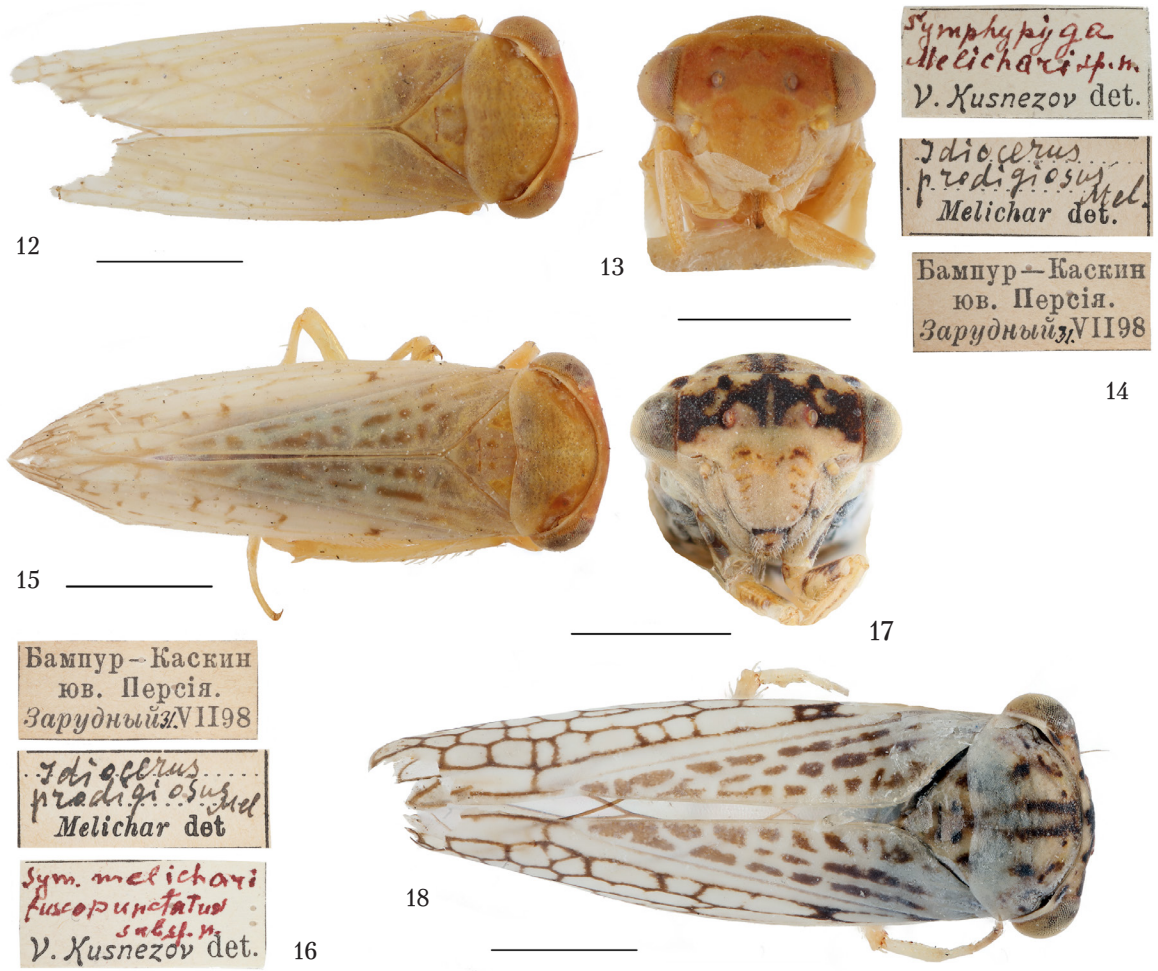
***Platyproctus melichari* (Kusnezov, 1929)**

Symphypyga melichari Kusnezov, 1929: 345, fig. 4.
Platyproctus melichari: Emeljanov, 1975: 389.
Symphypyga melichari fuscopunctata Kusnezov, 1929: 346, **syn. nov.**
Symphypyga maculatus Pruthi, 1930: 15, figs 18–20, **syn. nov.**
Platyproctus maculatus: Emeljanov, 1975: 389.
Platyproctus maculatus: Viraktamath, 2017: 49, figs 1–4, 9, 10, 13–16, 23–25.
(Figs 12–16, 19–28, 53, 54, 82–88)

Type material examined. Lectotype (here designated), male (dissected), "Bampur-Kaskin / se. Persia. / Zarudny 31.VII98" // "*Idiocerus prodigiosus* Mel. [hand written in ink] / Melichar det. [printed]" // "*Symphypyga melichari* sp. n. [hand written in ink] / V. Kusnezov det. [printed]" (ZIN).

Holotype, male, "Bampur-Kaskin / se. Persia. / Zarudny 31.VII98" // "*Idiocerus prodigiosus* Mel. [hand written in ink] / Melichar det. [printed]" // "*Sym. melichari* / *fuscopunctatus* / subsp. n. [hand written in ink] / V. Kusnezov det. [printed]" (ZIN).

Other material examined. UNITED ARAB EMIRATES: 3 males, 2 females, 4 larvae, Sharjah



Figs 12–18. *Platyproctus* spp. 12–14 – *P. melichari* (Kusnezov, 1929), male, lectotype, 15, 16 – *P. melichari fuscopunctatus* (Kusnezov, 1929), holotype, 17, 18 – *P. agraphopteron* (Bergevin, 1932). 12, 15, 18 – dorsal view; 13, 17 – frontal view; 14, 16 – labels. Scale bar – 1 mm.

Desert Park, N25°16.859′ E55°41.422′, 10 April 2010; 2 males, 5 females, same locality, 13 April 2010; 1 female, same locality, 17 April 2010; 5 males, 3 females, Abu Dhabi, Al Ajban, N24°36′ E55°01′, 17 April 2010, all leg. V.M. Gnezdilov (ZIN).

Male (Figs 53, 54). First and second apodemes small and short (Fig. 54). Pygofer lobes truncate caudally, with wide and rather short dorsal parts (Fig. 53).

Note. The species is well distinguished by subgenital plates each with large tooth latero-apically (Fig. 53). *Symphypyga melichari* was described by Kusnezov (1929) based on two males and three females with the label "S.-O. Persien, Bampur-Kaskin, 30.VII.1898, N. Zarudnyj". One male, two females, and the specimen without abdomen with the label "Bampur-Kaskin / se. Persia. / Zarudny 31.VII.98" were located in the collection of the Zoological Institute RAS. Only one male (dissected) from these series was marked by V. Kusnezov by the label "*Symphypyga melichari* sp. n. / V. Kusnezov det." and this male is designated here as the lectotype. The difference in date is apparently due to lapsus calami in Kusnezov's paper. *Symphypyga melichari fuscopunctata* was described after a single male listed above and treated as the holotype (Kusnezov 1929).

Symphypyga maculata, described by Pruthi (1930) from Lyallpur in Punjab (Pakistan) and later

Figs 19–23. *Platyproctus melichari* (Kusnezov, 1929), UAE. 19, 21 – female, dorsal view; 20 – same, ventral view; 22 – same, frontal view; 23 – larva, dorsal view. Scale bar – 1 mm.

recorded from Rajasthan in India by Viraktamath (2017), was transferred to the genus *Platyproctus* by Emeljanov (1975). According to male genitalia structure illustrated in detail by Viraktamath (2017, figs 26, 27, 29–34) *S. maculata* Pruthi, 1930 is a junior synonym of *S. melichari* Kusnezov, 1929 examined during this study including the dissected male lectotype and compared with Viraktamath's drawings with no differences discovered (Figs 82–88).

Platyproctus emir sp. nov.
(Figs 29–35, 55–63)

Diagnosis. Aedeagal shaft with denticles dorsally. Pygofer lobes with wide dorsal parts (Fig. 55).

Type material. Holotype, male, UNITED ARAB EMIRATES, Sharjah Desert Park, N25°16.859′ E55°41.422′, 10 April 2010, V.M. Gnezdilov leg. (ZIN). Paratypes: UNITED ARAB EMIRATES: 2 males, 13 females, Sharjah Desert Park, N25°16.859′ E55°41.422′, 10 April 2010; 8 females, same locality, 13 April 2010; 2 females, same locality, 17 April 2010; 2 females, Abu Dhabi, Al Ajban, N24°36′ E55°01′, 17 April 2010, all leg. V.M. Gnezdilov (ZIN).

Etymology. Species name derived from the Arabian "Emir" – leader.

Description. Ocelli well developed. Frontoclypeus weakly convex. Anteclypeus nearly square. Lorae nearly flat. Rostrum short, narrowing apically, reaching only middle coxae; 2nd and 3rd segments are equal in length. Pronotum convex, with strongly convex anterior margin. Mesonotum shorter than pronotum. Forewings slightly narrowing and rounded apically, clavus long, 3/4 of wing length. Hind wings well developed as long as forewings.

Figs 24–28. *Platyproctus melichari* (Kusnezov, 1929), UAE. 24 – male, lateral view; 25 – same, ventral view; 26 – same, frontal view; 27 – same, dorsal view; 28 – larva, frontal view. Scale bar – 1 mm.

Hind femur with two apical spines. Hind tibia with six spines ventro-apically, each with long subapical seta. First metatarsomere as long as second and third combined. Pretarsus with short arolium, far not reaching claw apices, with concave margin (in dorsal view). Hind margin of female sternite VII obtusely angularly excavated medially (Figs 35, 63). Ovipositor short, slightly surpassing pygofer margins (Fig. 35).

Coloration (Figs 29–35). Crown with 2+2 or 3+3 black spots near to eyes. Face with transverse brown to black stripe composed of fused spots above frontoclypeus. Frontoclypeus with brown to black median longitudinal stripe and transverse lateral stripes. Upper margin of frontoclypeus with dark brown to black line. Anteclypeus and lorae with brown to black margins. Anteclypeus sometimes with brown to black median line. Genae black below eyes and brown to black below antennae. Antennae brown. Rostrum light brown yellowish to dark brown, with black apex. Pronotum with dark brown to black irregular spots fused medially into area or line. Mesonotum with triangular black spots in upper angles, with black semicircular spot at upper margin, pair of black spots above transverse impression and pair of long black spots below it. Light specimens sometimes missing some spots and stripes on face and mesonotum. Forewing corium whitish, with dark brown to black veins. Clavus with large dark brown to black spots along veins. Hind wings semitransparent, with dark brown veins. Epimerae and episternae mainly black. Femora dark brown to black

Figs 29–32. *Platyproctus emir* sp. nov., male, paratype. 29 – dorsal view; 30 – lateral view; 31 – ventral view; 32 – frontal view. Scale bar – 1 mm.

on its upper surface and light yellow on its lower surface. Tibiae with dark brown to black spots on its upper surface, sometimes fused into areas, and light yellow on its lower surface. Fore and middle tibiae sometimes with brown upper surfaces. Hind tibiae with dark brown apical spines. Fore and middle legs with 1st and 3rd tarsomeres and 3rd metatarsomeres dark brown. Claws dark brown to black. Abdominal tergites and sternites black, with yellow lateral parts and hind margins, sometimes completely yellow in some females. Anal tube light yellow.

Male pygofer lobes with black dorsal parts and brown yellowish ventral parts. Genital valve black. Subgenital plates dark brown in basal halves and light brown to black distally.

Female sternite VII brown to dark brown. Female pygofer lobes yellowish brown, with pale margins near to black ovipositor.

Male genitalia (Figs 55–62). Second apodemes short and wide, slightly narrowing caudally. Pygofer lobes with large and long dorsal parts. Subgenital plates long, narrowing apically. Style with long narrow lobe, with subapical tooth, without apical hook and with very short, rounded wide lobe. Connective long, narrow. Aedeagal shaft tubular, arcuate, with denticles on its dorsal surfaces and apical gonopore.

Total length. Males – 4.0 mm. Females – 5.0 mm.

Note. The species is closely related to *P. camena* (Linnavuori, 1969), comb. nov. and *P. omani* (Kameswara Rao et Ramakrishnan, 1983), comb. nov. according to aedeagal shaft with denticles, not swollen basally (in ventral view) and arcuate (in lateral view) (Figs 60, 61), style with long narrow lobe, without hook apically, with subapical tooth present and short wide lobe not truncated (Figs 58, 59). It

Figs 33–35. *Platyproctus emir* sp. nov., female, paratypes. 33, 34 – dorsal view; 35 – ventral view. Scale bar – 1 mm.

differs from the mentioned species by the denticles on dorsal surface of aedeagal shaft and wider pygofer lobes.

***Platyproctus agraphopteron* Bergevin, 1932**

Platyproctus agraphopteron Bergevin, 1932: 234, fig. 1a–c.

Platyproctus agraphopteron: Linnavuori, 1969: 210, fig. 2a, b.

Platyproctus agraphopteron: Al-Ne'amy & Linnavuori: 114, figs 8d, 9a.

(Figs 17, 18, 64–71)

Material examined. UNITED ARAB EMIRATES: 1 male, 1 larva, Sharjah Desert Park, N25°16.859′ E55°41.422′, 13 April 2010, V.M. Gnezdilov leg. (ZIN).

Male genitalia (Figs 64–71). Dorsal parts of pygofer lobes long, narrowing caudally. Subgenital plates slightly narrowing apically. Gonopore apical. Style with narrow lobe without hook apically, with subapical tooth, wide lobe hook-shaped. Connective elongate. Aedeagal shaft curved (in lateral view), with lateral denticles in its upper third (in ventral view).

Note. The species was described from southern Algeria (Bergevin 1932) and later recorded from Israel and Arabia (Linnavuori 1962, 1969). Here it is identified after Linnavuori's illustrations of pygofer and style (Linnavuori 1969, fig. 2a, b).

***Platyproctus camena* (Linnavuori, 1969), comb. nov.**

Assiuta camena Linnavuori, 1969: 213, fig. 4.

(Figs 36–38)

Figs 36–38. *Platyproctus camena* (Linnavuori, 1969), female, paratype. 36 – dorsal view; 37 – ventral view; 38 – frontal view. Scale bar – 1 mm.

Figs 39–41. *Assiuta salina* (Lindberg, 1954), female, Canary Islands. 39 – dorsal view; 40 – ventral view; 41 – frontal view. Scale bar – 1 mm.

Figs 42–45. *Emelyanogramma proxima* (Dlabola, 1960), male, Iran; 42 – dorsal view; 43 – ventral view; 44 – lateral view; 45 – frontal view. Scale bar – 1 mm.

Material examined. EGYPT: 1 female, paratype, "Pyramids / Egypt / 5.6.34 [hand written] / Dr. H. Priesner" // "Paratypus" (red) // "*Assiuta camena* Lv." [hand written] (ZIN).

***Platyproctus omani* (Kameswara Rao et Ramakrishnan, 1983), comb. nov.**

Symphypyga omani Kameswara Rao et Ramakrishnan, 1983: 21, figs 1–9.

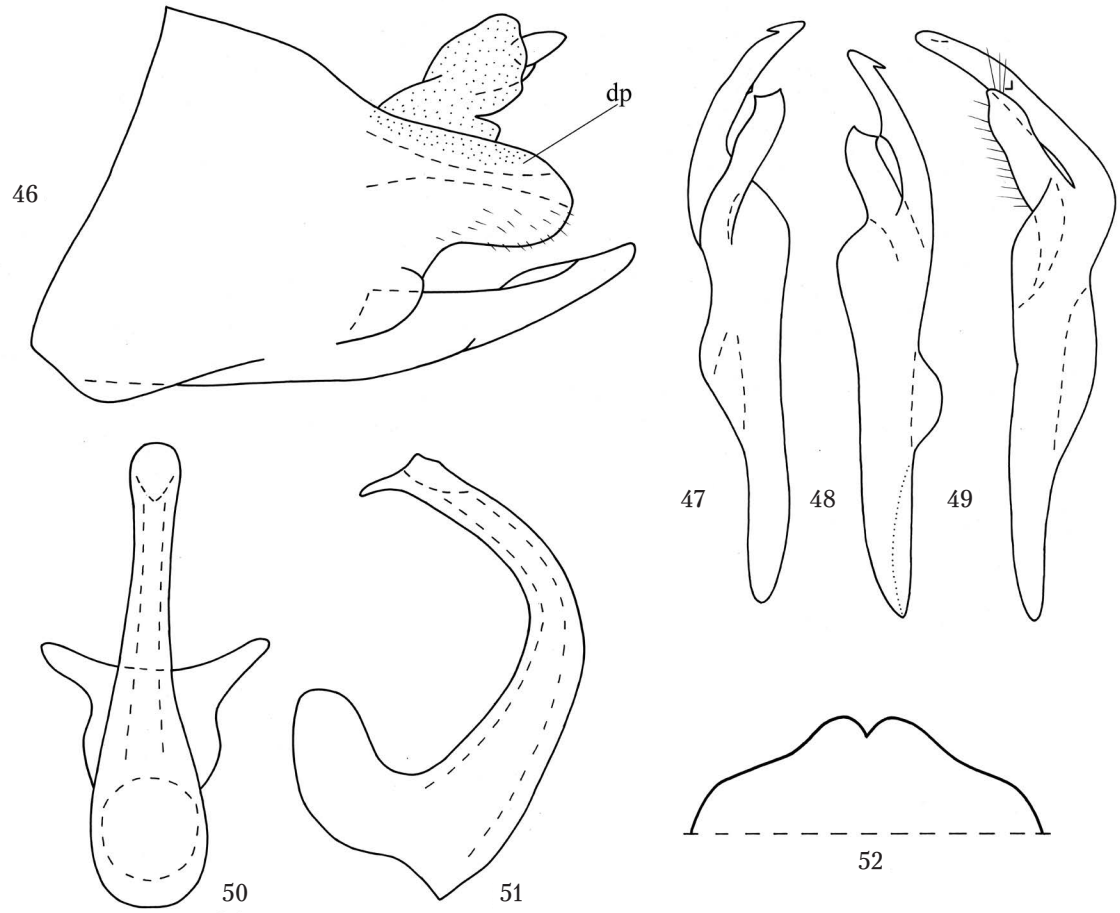
Assiuta omani: Viraktamath, 2017: 48, figs 5–8, 11, 12, 17–21, 36–49.

Note. The species is placed in the genus *Platyproctus* according to male genitalia structure discussed above for *P. emir* sp. nov.

Genus *Assiuta* Linnavuori, 1969

Type species: *Melicharella salina* Lindberg, 1954, by original designation.

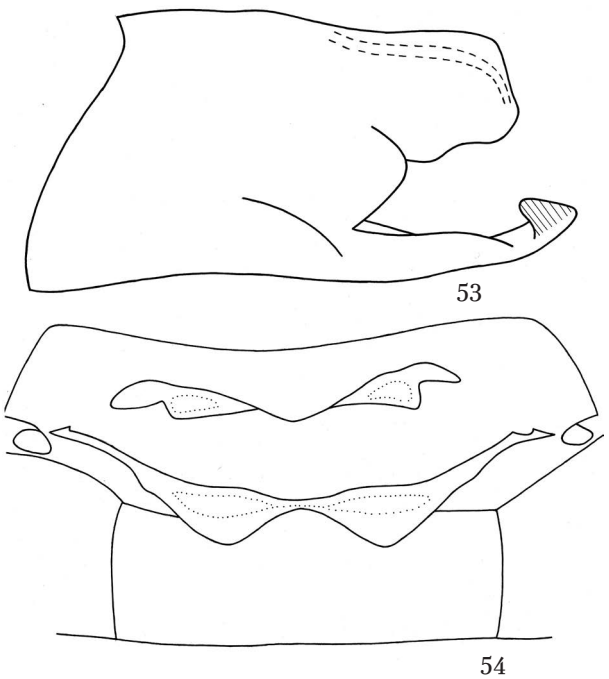
Note. Linnavuori (1969) erected the genus *Assiuta* for *Melicharella salina* Lindberg, 1954 (as a type species) from the Canary Islands (Lindberg 1954). He also included in this genus *M. hieroglyphica* Bergevin, 1925 from northeastern Algeria and southwestern Tunisia (Bergevin 1925), transferred by Bergevin (1932) to the genus *Platyproctus*, and described *Assiuta camena* Linnavuori, 1969, from Egypt (Linnavuori 1969). However my study of the specimens available and the original descriptions of the species listed above showed that *Assiuta salina* (Lindberg,



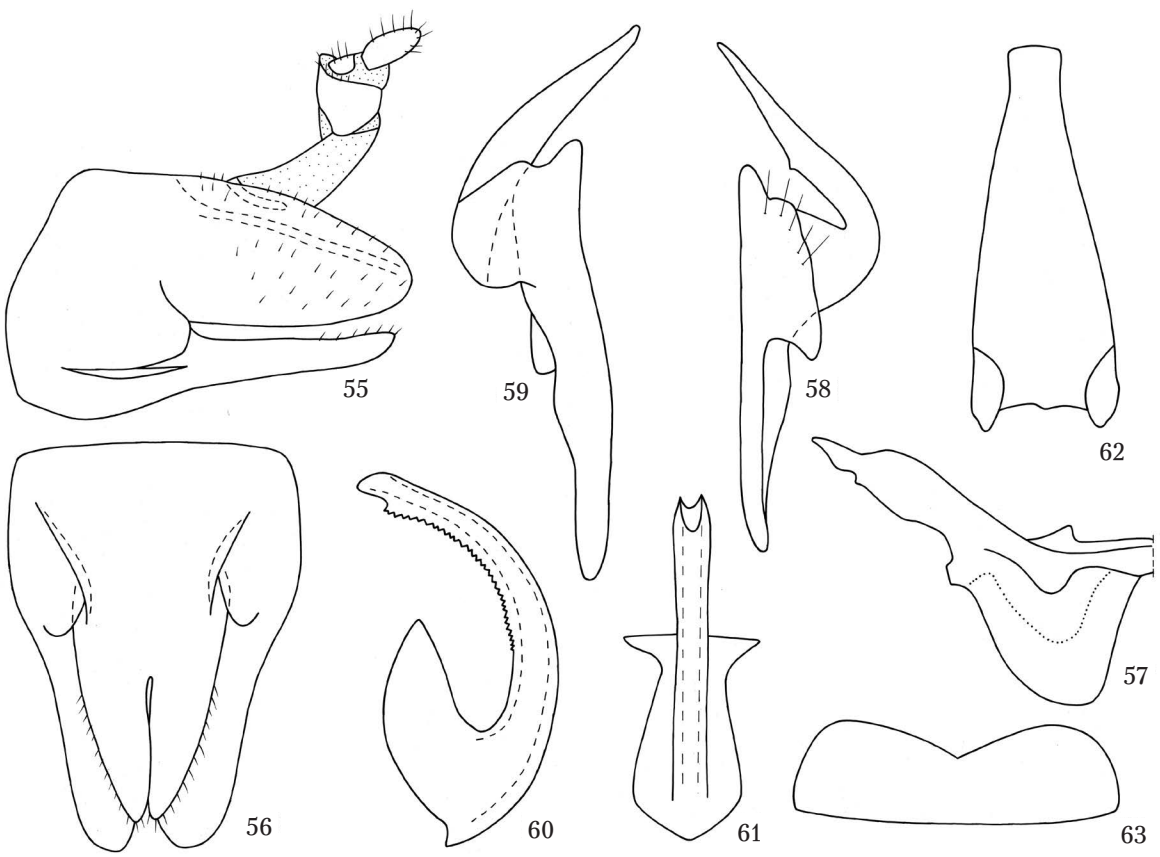
Figs 46–52. *Platyproctus marmoratus* (Horváth, 1894), male and female genitalia. 46 – anal tube, pygofer and subgenital plates, lateral view; 47–49 – style, lateral view; 50 – aedeagus, ventral view; 51 – aedeagus, lateral view; 52 – hind margin of sternite VII. ventral view. Abbreviation: dp – dorsal part of pygofer lobe. Out of scale.

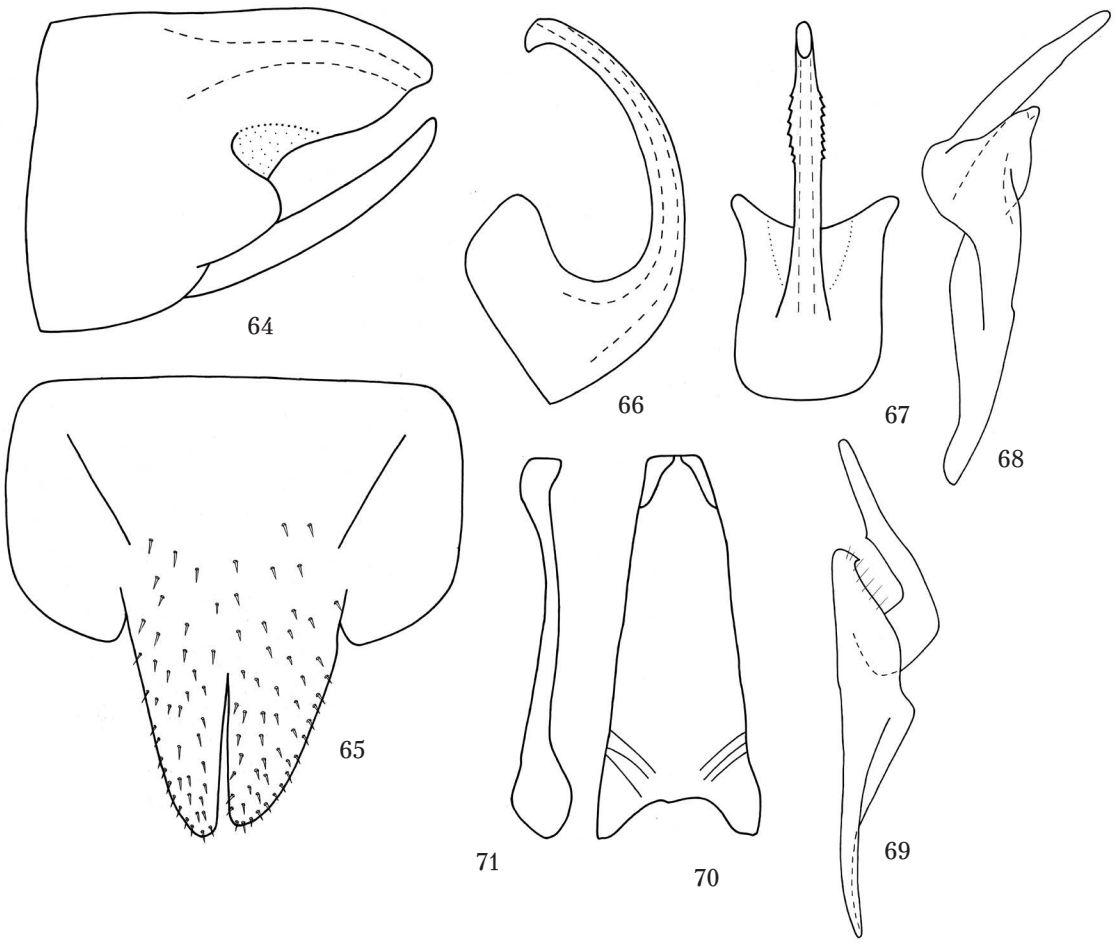
1954) is peculiar by its robust and wide body with forewings (Figs 39, 40), compressed aedeagus with dentate ventral margin of shaft (in lateral view), long and narrow subgenital plates, narrow dorsal parts of pygofer lobes, style with narrow long lobe truncated and wide short lobe hook-shaped, and female sternite VII with hind margin deeply notched medially (Lindberg 1954, fig. 49 a, c, e, f, g; Viraktamath 2017, figs 52, 53, 54, 56). Two other species included in the genus are slender (in dorsal view) (Figs 36, 37) and *A. camena* has strongly curved tubular aedeagus, rather short subgenital plates, wider dorsal parts of pygofer lobes, style with narrowing apically, bearing subapical tooth, narrow lobe and very short wide lobe, and female sternite VII with hind margin weakly concave (Linnavuori 1969, fig. 4, d, e, f; Viraktamath 2017, fig. 50). According to Lindberg (1954), *Assiuta salina* is monophage on *Traganum moquini* Webb ex Moq. (Amarantaceae) while *A. camena* and *A. hieroglyphica* occurring on *Calligonum comosum* L. (Polygonaceae) (Bergevin 1925; Linnavuori 1969). Thus, I suggest to treat the genus *Assiuta* Linnavuori 1969 as monotypic Canarian endemic, following Emeljanov (1975), and transfer *Assiuta camena* Linnavuori, 1969 to the genus *Platyproctus* Lindberg. The structure of male genitalia of *M. hieroglyphica* have to be examined to make final decision on the taxonomic position of this species. Strongly dentate ventral margin of aedeagal shaft of *Assiuta salina* places it close to *Emelyanogramma proxima* (Dlabola, 1960) (Fig. 74), however, latter species has peculiar style with two large apical teeth of long lobe (Figs 78, 79).

Figs 53–54. *Platyproctus melichari* (Kusnezov, 1929), UAE, male genitalia. 53 – pygofer, lateral view; 54 – first and second abdominal apodemes, dorsal view. Out of scale.



Figs 55–63. *Platyproctus emir* sp. nov., male and female genitalia. 55 – anal tube, pygofer and subgenital plates, lateral view; 56 – pygofer and subgenital plates, ventral view; 57 – second abdominal apodemes, dorsal view; 58, 59 – style, lateral view; 60 – aedeagus, lateral view; 61 – aedeagus, ventral view; 62 – connective; 63 – hind margin of sternite VII, ventral view. Out of scale.





Figs 64–71. *Platyproctus agraphopteron* (Bergevin, 1932), male genitalia. 64 – pygofer and subgenital plates, lateral view; 65 – same, ventral view; 66 – aedeagus, lateral view; 67 – aedeagus, ventral view; 68, 69 – style, lateral view; 70 – connective; 71 – same, lateral view. Out of scale.

***Assiuta salina* (Lindberg, 1954)**
Melicharella salina Lindberg, 1954: 201, fig. 49a–g.
Assiuta salina: Linnavuori, 1969: 212, fig. 3g.
(Figs 39–41)

Material examined. CANARY ISLANDS: 1 female, "Fuerteventura / Jandia 31.III.–1.IV.63 / Lindberg" (ZIN).

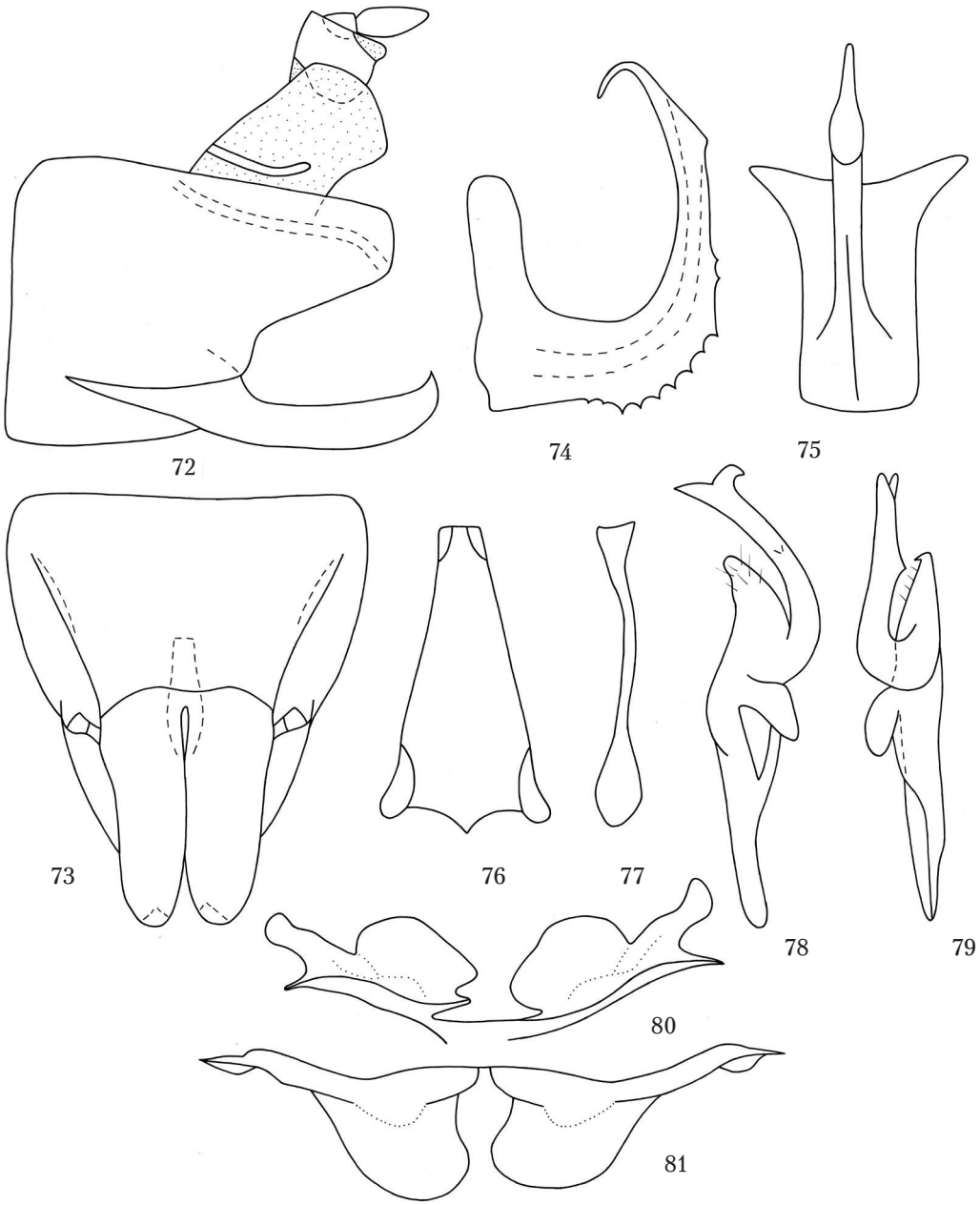
Genus *Emelyanogramma* Koçak, 1981
Emelyanogramma Koçak, 1981: 33 nom. nov. pro *Homogramma* Emeljanov, 1975: 386 nec *Homogramma* Guenee, 1854.

Type species: *Melicharella proxima* Dlabola, 1960, by original designation.

***Emelyanogramma proxima* (Dlabola, 1960)**
Melicharella proxima Dlabola, 1960b: 8, taf. 4, fig. 3.
Homogramma proxima: Emeljanov, 1975: 386.
(Figs 42–45, 72–81)

Material examined. IRAN: 2 males, 4 females, "vill. Goarpusht / Bampur, se Persia / Zarudny. 10 IV 01" (ZIN); 2 males, "Bampur and its / surroundings; se Persia / Zarudn. 12–8 IV 01" (ZIN); 1 female, "m. Kishi, str. Ge, / Makran; se Persia / Zarudny. 28 III 01" (ZIN).

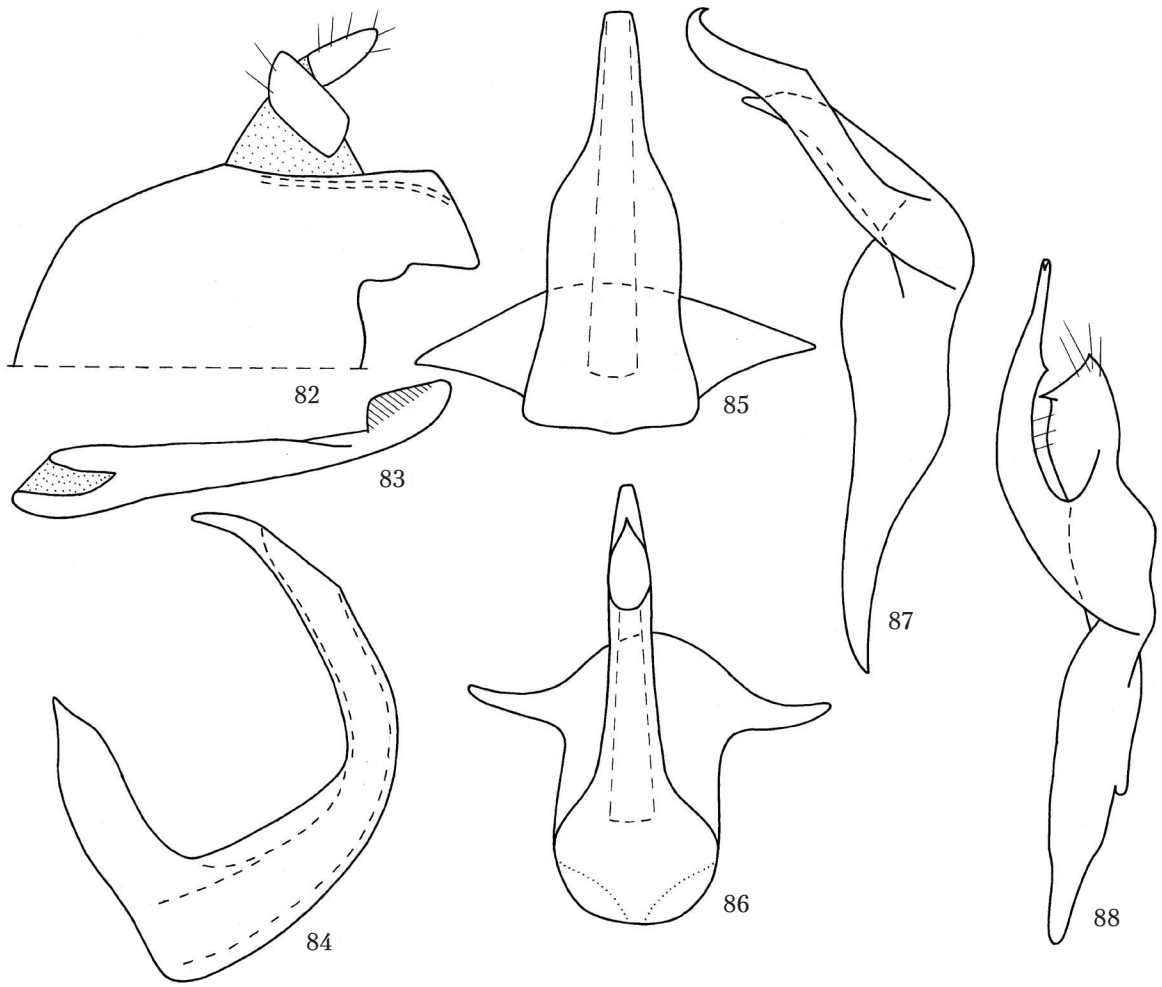
Male genitalia (Figs 72–81). First and second apodemes short and wide, widely rounded. Dorsal parts of pygofer lobes wide, truncate caudally. Subgenital plates not narrowing apically, upturned and



Figs 72–81. *Emelyanogramma proxima* (Dlabola, 1960), male genitalia. 72 – anal tube, pygofer and subgenital plates, lateral view; 73 – pygofer and subgenital plates, ventral view; 74 – aedeagus, lateral view; 75 – adeagus, ventral view; 76 – connective; 77 – same, lateral view; 78, 79 – style, lateral view; 80 – first abdominal apodemes, dorsal view; 81 – second abdominal apodemes, dorsal view. Out of scale.

apically pointed. Style with long and narrow lobe bifid apically and small subapical tooth, wide lobe hooked apically. Connective elongate. Aedeagus hourse-shoe shaped (in lateral view). Aedeagal shaft with denticles ventrally and hook-shaped apex. Gonopore apical.

Total length. Males – 4.0 mm. Females – 4.8–5.0 mm.



Figs 82–88. *Platyproctus melichari* (Kusnezov, 1929), lectotype, male genitalia. 82 – pygofer and anal tube, lateral view; 83 – subgenital plate, lateral view; 84 – aedeagus, lateral view; 85, 86 – aedeagus, ventral view; 87 – style, dorsal view; 88 – style, ventral view. Out of scale.

Note. The species was described based on three females from Iranshar (or Iranshahr) in Bampur Valley of southeastern Iran (Sistan and Baluchestan Province) (Dlabola 1960b). Thus the specimens listed above from Bampur are treated here as conspecific with the type series from Iranshar. Here male genitalia structure of this species is illustrated for the first time.

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