

**RESULTS OF THE CZECHOSLOVAK-IRANIAN ENTOMOLOGICAL
EXPEDITIONS TO IRAN****Coleoptera, Buprestidae**

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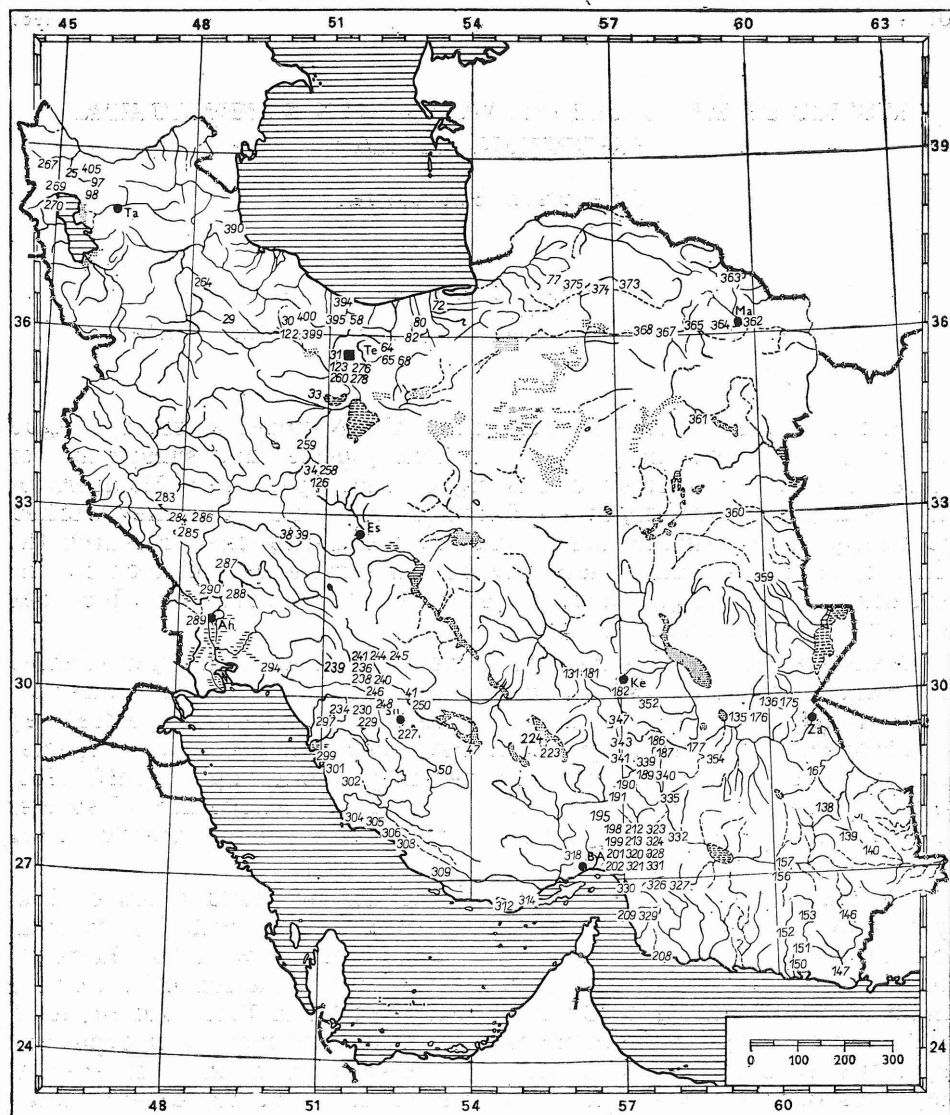
In the course of three expeditions of the National Museum, Prague to Iran in 1970, 1973 and 1977, 172 taxons (species and subspecies) of Buprestidae were collected consisting of 1450 specimens. Members of the expeditions spent altogether 15 months in the field and they worked practically in all climatic zones and covered during their research the entire territory of Iran. I dare say that the material collected by the expeditions is the largest and richest material of Buprestidae which has been collected in Iran so far.

Many species were reared from their host plants and this enabled us to know their biology. From the number of 172 taxons collected, 8 were found in Turkey only and 23 were proved to be new species (19) or subspecies (4). In this paper 16 new species and 4 new subspecies are described; 3 species were described in previous papers (Bílý, 1980; Volkovič, Bílý, 1979; Volkovič, 1982 — in press). Altogether 77 species (incl. 23 new ones) were proved to be new for the Buprestid fauna of Iran.

No special paper has been devoted to the Buprestid fauna of Iran up to now although many Buprestid species were described from Iran. Complete lack of any comprehensive paper dealing with the Buprestid fauna of Iran was the greatest obstacle in determination of specimens studied. I have to thank to Dr. A. Descarpentries of Paris and Dr. A. V. Alexeev of Moscow for the comparison of some specimens with types and especially to Dr. M. G. Volkovič of Leningrad for making differential diagnoses of the new species of Acmaeoderinae and for determination of some species of this difficult group. I must also thank all members of the expeditions for their diligence in the field which provided me with such interesting work.

Collecting data of each specimen are accompanied by the number of the locality and the map of all the collecting places was constructed to enable prompt orientation of localities. In addition the detailed reports from the first and second expeditions were published by Hoberlandt (1974, 1981) with the detailed descriptions of all localities.

In the evaluation of material the new system of subfamilies accor-



A map of Iran showing the collecting places of Buprestidae of three expeditions of National Museum, Prague in 1970, 1973 and 1977.

ding to Cobos (1980) was used. All material, including holotypes and paratypes, is deposited in the collections of the National Museum, Prague.

JULODINAE

Aaata finchi (Waterhouse, 1884)

SE. Iran, Bahu Kalat, 3.—4. 4. 1973, loc. no. 147, 3 ex. (dead specimens).

Distribution: Beloudjistan.

Julodis escalerae Abeille, 1904

SW. Iran, Hoseiniyeh, 28 km NNW. Andimeshk, 12.—13. 4. 1977, 360 m, loc. no. 286, 4 ex.; C. Iran, 2800 m, Lalehzar, 24.—30. 5. 1977, loc. no. 347, 2 ex.; SW. Iran, Bidruyeh, 36 km NNW. Andimeshk, 11.—12. 4. 1977, 440 m, loc. no. 285, 1 ex.

Distribution: Iran.

Julodis faldermanni eoa Obenberger, 1923

SE. Iran, Sands, 13—47 km N. Espake, 11. 4. 1973, loc. no. 156, 19 ex.; S. Iran, Asalooyeh, 23. 4. 1977, loc. no. 308, 1 ex.

Distribution: Beloudjistan.

Julodis variolaris variolaris (Pallas, 1773)

NW. Iran, 26 km SSE. Khoy, 6. 7. 1973, loc. no. 267, 3 ex.; E. Iran, 13 km WSW. Kerman, 29. 4. 1973, loc. no. 182, 1 ex.; NE. Iran, 10 km W. Sabzavar, 15.—16. 6. 1977, loc. no. 368, 3 ex.; E. Iran, 25 km N. Birjand, 2000 m, 6.—7. 6. 1977, loc. no. 360, 1 ex.

Distribution: Central Asia, North and East Iran.

Julodis consobrina gotwendensis Obenberger, 1924

S. Iran, Asalooyeh, 23. 4. 1977, loc. no. 308, 24 ex.; S. Iran, Borazjan, 19. 4. 1977, loc. no. 299, 1 ex.; S. Iran, Maloo, 14 km W. Bandar Lengeh, 25. 4. 1977, loc. no. 312, 1 ex.

Distribution: South Iran.

Julodis speculifera Castelnau, 1835

S. Iran, 20 km NW. Borazjan, 18. 4. 1977, loc. no. 297, 3 ex.

Distribution: East Turkey, Syria, Arabia, Iraq, Iran, Egypt.

Julodis onopordi sovitzii Steven, 1830

Turkey, SE. Anatolia, Yüksekova, 7. 7. 1973, 1 ex.; Turkey, S. Anatolia, Toprakkale, 10.—11. 7. 1973, 1 ex.; N. Iran, Robate Tork, 24.—25. 6. 1973, loc. no. 258, 2 ex.

Distribution: East Turkey, Lebanon, Syria, North Iran.

***Julodis onopordi andreae* (Olivier, 1790)**

NW. Iran, Jabal Kandi, 6. 7. 1973, loc. no. 270, 7 ex.; NW. Iran, 20 km N. Sharpur, 27. 7. 1977, loc. no. 405, 1 ex.; NW. Iran, Qazvin, 24. 6. 1970, loc. no. 29, 2 ex.

Distribution: West Iran, Kurdistan.

***Julodis onopordi ehrnbergi* Castelnau, 1835**

Turkey, S. Anatolia, Toprakkale, 10.—11. 7. 1973, 2 ex.

Distribution: South Balcan, South Anatolia.

***Julodis laevicostata* Gory, 1840**

S. Iran, 29 km E. Yasuj, 2300 m, 16.—17. 6. 1973, loc. no. 245, 1 ex., N. Iran, C. Elburz, Damavand, Lajran, 2400 m, 23. 7. 1970, loc. no. 68, 1 ex.; N. Iran, Kandavan pass, 4.—9. 7. 1977, 2700—2900 m, loc. no. 395, 15 ex.; N. Iran, 8 km NE. Ziarn, 2400 m, 10.—16. 7. 1977, loc. no. 400, 1 ex.

Distribution: Iran.

***Julodis klapaleki* Obenberger, 1924**

Julodis ormarensis Obenberger, 1924,

syn. nov.

SE. Iran, Rask, vall. r. Sarbaz, 3.—4. 4. 1973, loc. no. 146, 7 ex.; SE. Iran, 25 km W. Ghasre-ghand, 9.—10. 4. 1973, loc. no. 153, 2 ex.; SE. Iran, 13 km SSE. Nikshahr (riv.), 8.—9. 4. 1973, loc. no. 152, 2 ex.; SE. Iran, Bahu-Kalat, 3.—4. 4. 1973, loc. no. 147, 3 ex.; SE. Iran, 55—78 km NNW. Tis, Pish mant riv., 8. 4. 1973, loc. no. 151, 1 ex.

Distribution: Beloudjistan.

After studying the type specimens I have concluded that *J. ormarensis* Obnb. is conspecific with *J. klapaleki* Obnb. and a junior synonym. Both species were described in one paper (Obenberger, 1924) but *J. klapaleki* on page 9 and *J. ormarensis* on page 10.

***Julodis euphratica* Castelnau et Gory, 1835**

E. Iran, 1650 m, Gav Koshi, 7.—8. 5. 1973, loc. no. 190, 1 ex.; NW. Iran, Qazvin, 24. 6. 1970, loc. no. 29, 20 ex.; NE. Iran, 20 km E. Sabzevar, 15. 6. 1977, loc. no. 367, 1 ex.; N. Iran, Robat Tork, 24.—26. 6. 1973, loc. no. 258, 1 ex.; E. Iran, 1600 m, Mohammadabad, 3.—5. 5. 1973, loc. no. 187, 1 ex.; S. Iran, Jashak, 60 km SE. Kharmuj, 20.—21. 4. 1977, loc. no. 304, 1 ex.

Distribution: Arabia, Iraq, Iran, Afghanistan.

***Julodis euphratica beludjistana* Obenberger, 1924**

Julodis euphratica nusskina Obenberger, 1924,

syn. nov.

S. Iran, 33 km S. Sabzevaran, 17. 5. 1977, loc. no. 335, 36 ex.; SE. Iran, 11.—12. 4. 1973, Chasemabad, 10 km E. Bampur, loc. no. 157, 3 ex.;

S. Iran, Baghu, 25. 5. 1973, loc. no. 212, 1 ex.; S. Iran, 400 m, 6 km W. Geno, 7.—8. 5. 1977, loc. no. 323, 2 ex.; S. Iran, Jasak, 60 km SE. Khor-muj, 20.—21. 4. 1977, loc. no. 304, 3 ex.; C. Iran, 2000 m, 12 km NW. Dow-latabad, 21. 5. 1977 loc. no. 341, 1 ex.; S. Iran, Isin, 28. 4.—6. 5. 1977, loc. no. 320, 10 ex.; E. Iran, Bam, 24.—25. 4. 1973, loc. no. 177, 2 ex.; SE. Iran, 55—78 km NNW. Tis, Pish mant riv., 8. 4. 1973, loc. no. 151, 8 ex.; SE. Iran, Khash, 28. 3. 1973, loc. no. 138, 1 ex.; S. Iran, 220 m, Senderk, 12.—13. 5. 1977, loc. no. 327, 1 ex.; SE. Iran, Tis, 6.—7. 4. 1973, loc. no. 150, 1 ex.; SE. Iran, Bahu-Kalat, 3.—4. 4. 1973, loc. no. 147, 4 ex.; SE. Iran, Rask. vall. r. Sarbaz, 3.—4. 4. 1973, loc. no. 146, 2 ex.; SE. Iran, 13 km SSE. Nikshahr (riv.), 8.—9. 4. 1973, loc. no. 152, 3 ex.; S. Iran, Der-pehan, 12 km E. Senderk, 11.—12. 5. 1977, loc. no. 326, 2 ex.; S. Iran, Chan-e-Bageh, 35 km S. Kahnul, 15.—16. 5. 1977, loc. no. 332, 1 ex.; S. Iran, Ahram, 45 km ESE. Bushehr, 19.—20. 4. 1977, loc. no. 301, 1 ex.; S. Iran, Ziarat, 23 km NWN Bilaj, 14.—15. 5. 1977, loc. no. 330, 2 ex.; S. Iran, 400—600 m, Kuh-e-Geno Mts., 1.—4. 5. 1977, loc. no. 321, 1 ex.; S. Iran, 600—1000 m, Kuh-e-Geno Mts., 27.—28. 4. 1977, loc. no. 318, 2 ex.; S. Iran, Minab, 13. 5. 1977, loc. no. 328, 24 ex.

Distribution: Beloudjistan.

After studying the type specimens of both species I have concluded that *J. euphratica nusskina* Obnb. is conspecific with *J. euphratica belud-jistana* Obnb. and a junior synonym.

***Julodella dilaticollis* Semenov, 1893**

NW. Iran, 26 km SSE. Khoy, 6. 7. 1973, loc. no. 267, 1 ex.; NW. Iran, 21 km SE. Shahpur, 6. 7. 1973, loc. no. 269, 4 ex.

Distribution: Transcaucasus, North Iran.

***Julodella impluviata* Semenov, 1893**

NW. Iran, 26 km SSE. Khoy, 6. 7. 1973, loc. no. 267, 1 ex.

Distribution: Iran:

***Julodella iranica* sp. n.**

(Tab. I, Fig. 1)

Body very vaulted, dark green-bronze with extremelly short silver pubescence; some specimes with sparse white toment which is not condensed in spots or stripes; legs, antennae and posterior margins of abdominal segments brown with slight metallic lustre.

Head with short silver pubescence which is longer on clypeus and postclypeal part of frons and shorter on posterior part of frons and vertex; anterior margin of clypeus deeply and widely incurved; frons flat very wide, inner margins of eyes incurved in medial part; vertex vaulted; structure of head consisting of a very fine microstructure and of rough simple and dense punctures; puncturation of head is somewhat rougher than that of pronotum; antennae relatively long, reaching almost posterior pronotal angles; the first antennal segment robust 2.5 times longer than wide, slightly bent; the second segment short only 1.2 times

longer than wide and the third one very thin and long — 4 times longer than wide at base, slightly enlarged apically; the fourth segment slightly serrate, segments V—X sharply serrate with very sharp outer angles, the last segment trapezoidal; antennae hairless.

Pronotum very vaulted, lustrous 1.2 times wider than long, its anterior margin straight or very slightly lobate; lateral margins straightly tapering anteriorly in the first three fourths, the widest part of pronotum in posterior fourth; structure of pronotum consisting of very dense and rough simple punctures, intervals between these punctures are narrower than their diameter.

Elytra vaulted, subparallel 1.4 times longer than wide at humeral part, regularly tapering in posterior third; each elytron with three apical spines; structure of elytra consisting of very dense and fine simple punctures which are somewhat larger at humeral part; elytra without any grooves or keels; elytral pubescence extremely short on disc and somewhat longer at apex and along lateral margins; discal pubescence is only twice longer than diameter of elytral punctures, lateroapical pubescence is about twice longer than the discal one; epipleura with small but sharp subhumeral tooth.

Legs relatively long with enlarged tarsae and with long sparse silver pubescence; claws yellow-brown and long, somewhat enlarged at base. ventral side with rough puncturation and with long and silver recumbent pubescence; anal segment distinctly cut in both sexes.

Aedeagus (Tab. I, Fig. 3) short and robust, parameras only slightly open.

Length: 10.5—18.0 mm (holotype 12.0 mm); width: 4.0—7.9 mm (holotype 4.3 mm).

Holotype (♂): S. Iran, 40 m, 6 km W. Geno, 7.—9. 5. 1977, loc. no. 323. Coll. Nat. Mus., Prague, cat. no. 26 639.

Allotype (♀): the same data.

Paratypes: 38 ex. (35 ♂♂, 3 ♀♀) the same data; 1 ♂: S. Iran, Asalooyah 23. 4. 1977, loc. no. 308; 1♂: S. Iran, Isin, 28. 4.—6. 5. 1977, loc. no. 320; 1 ♂, 2 ♀♀: S. Iran, 28 km N. Masiri, 1650 m, 12. 6. 1973, loc. no. 236. All type material collected by beating of *Moricanda persica*.

Julodella iranica sp. n. belongs to the group of species without elytral grooves and without condensed elytral toment and it is related to *J. abeillei* Théry from which it differs in the following characteristics:

J. iranica sp. n.

Lateral pronotal margins straight in anterior three fourths.

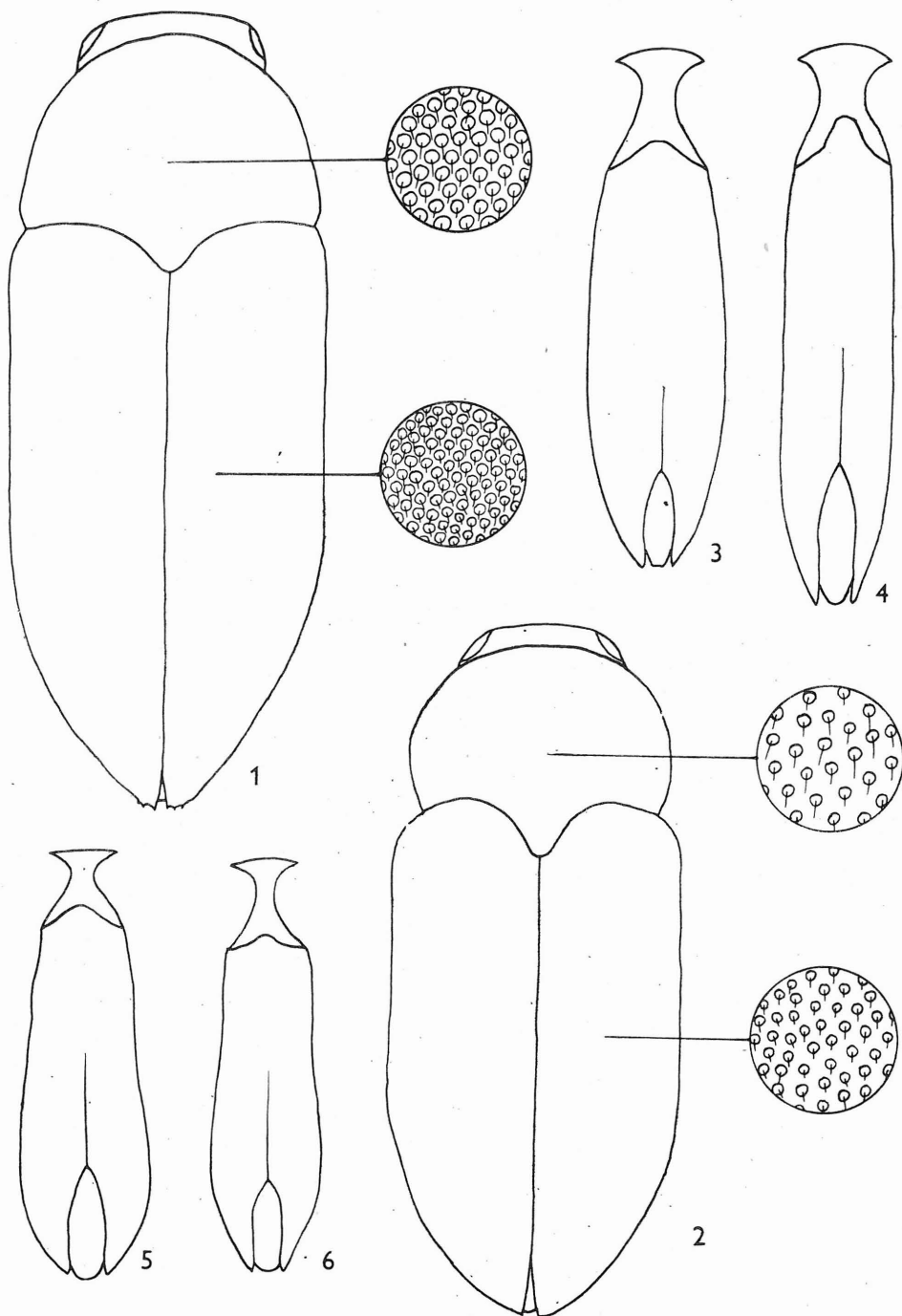
Pronotal puncturation rough and homogenous.

J. abeillei Théry

Lateral pronotal margins arched in anterior half.

Pronotal puncturation fine; it is more sparse and finer on anterior part in middle than on the lateral and posterior parts.

Table 1. Fig. 1: *Julodella iranica* sp. n., holotype, ♂, 12.0 mm; 2: *Julodella parvula* sp. n., holotype, ♂, 9.6 mm; 3: *Julodella iranica* sp. n., aedeagus; 4: *Julodella abeillei* Théry, aedeagus; 5: *Julodella parvula* sp. n., aedeagus; 6: *Julodella testaceipes* Obnn., aedeagus.



Elytral pubescence very short, only twice longer than diameter of elytral punctures.

Aedeagus (Tab. I, Fig. 3) very short and robust.

Elytral pubescence longer, 4 times longer than diameter of elytral punctures.

Aedeagus (Tab. I, Fig. 4) long and slender.

***Julodella parvula* sp. n.**

(Tab. I, Fig. 2)

Body small, very vaulted, bluish green, pronotum very lustrous with golden green lustre; entire body with fine and homogenous white pubescence; legs golden green with brown tarsae.

Head with rather short white pubescence, anterior margin of clypeus deeply incurved; frons flat, vertex slightly vaulted, inner margins of eyes slightly incurved at middle part; head with very fine microstructure and with fine dense puncturation; antennae sharply serrate from the fifth segment, the fourth segment only slightly serrate; the third segment 3 times longer than wide, almost subcylindrical, the second segment 1.3 times longer than wide and the first segment robust 2.5 times longer than wide, slightly bent with sharp dorsal keel and with small notch on outer margin.

Pronotum extremely vaulted almost ball-shaped, lustrous; anterior pronotal margin with row of fine white hairs, pubescence of entire pronotum very sparse and indistinct; structure of pronotum consisting of fine and homogenous puncturation, intervals between punctures 2—3 times wider than their diameter; both puncturation and pubescence are somewhat denser at pronotal margins.

Elytra vaulted 1.7 times longer than wide at humeral part, matt with silky lustre; elytral pubescence fine and white, hairs at apical part somewhat longer than those on elytral disc; elytra without apical spines; structure of elytra consisting of fine dense puncturation on almost matt background and of feeble traces of longitudinal rows of large and shallow punctures; basal part of elytra with fine transverse wrinkles.

Legs long, golden green with long white pubescence; tarsae and apical parts of femur and tibia brown with metallic lustre; ventral side golden green with fine and very short white pubescence, posterior margins of sternites brown; metasternum with shallow medial groove; last abdominal sternite slightly cut apically.

Aedeagus (Tab. I, Fig. 5) short and robust, parameras slightly enlarged apically.

Length: 9.6 mm; width: 3.9 mm.

Holotype (♂): SW. Iran, Hoseiniyeh, 28 km NNW. Andimesh, 12.—13. 4. 1977, loc. no. 286. Coll. Nat. Mus., Prague, cat. no. 26 640.

Female unknown.

Julodella parvula sp. n. is the smallest species of the genus and it is closely related to *J. testaceipes* Obnb. They differ from each other (besides their different size and body shape) by the characteristics given in the following table:

J. parvula sp. n.

Tibiae golden green with brown apex, tarsae brown, antennae black.

Pronotum ball-shaped, extremely lustrous.

Pronotal puncturation very fine, intervals between punctures 2—3 times wider than their diameter.

Elytra with traces of rows of punctures and with extremely fine white pubescence.

Ventral side without toment.

Aedeagus (Tab. I, Fig. 5).

Both new species described above (*J. iranica* sp. n. and *J. parvula* sp. n.) belong to the species group with short and smooth body without elytral grooves or ridges and without tomentose stripes. This group includes *J. abeillei* Théry, *J. testaceipes* Obnb., *J. brevilata* Sem., *J. iranica* sp. n. and *J. parvula* sp. n. Both new species differ from *J. abeillei* by very short robust aedeagus and by short pubescence, from *J. testaceipes* by coloration, form of aedeagus and short dorsal pubescence and from *J. brevilata* by more slender, smaller body and fine pronotal structure (*J. parvula* sp. n.) and by simple elytral puncturation and by not having ball-shaped pronotum (*J. iranica* sp. n.).

J. testaceipes Obnb.

Tibiae and tarsi yellow, antennae brown.

Lateral pronotal margins straight in anterior part, pronotum of the same slight lustre as elytra.

Pronotal puncturation rougher and denser, intervals between punctures narrower than their diameter.

Elytra without any rows of punctures but with long and dense white pubescence and with irregular white tomentose spots.

Ventral side covered with white toment.

Aedeagus (Tab. I, Fig. 6).

Julodella impressithorax sp. n.
(Tab. II, Fig. 8)

Body black with slight bronze lustre, posterior margins of abdominal sternites and claws brown; very vaulted and elongate species with very rough dorsal structure consisting of smooth lustrous and irregular reliefs and rough punctured depressions.

Frons flat, vertex slightly vaulted, anterior margin of clypeus with wide arched incision; inner margins of eyes only very slightly incurved; structure of head consisting of a very fine microstructure and of rough, shallow and very dense punctures; intervals between these punctures are narrower than their diameter (on postclypeal part and vertex) or intervals and diameters of punctures are equal (frons); antennae relatively long almost reaching posterior pronotal angles; antennae enlarged from the 5th segment, segments V—XI slightly rhomboid; the 4th segment slightly triangular, the 3rd one slender 2.5 times longer than wide at apex.

Pronotum relatively narrow, 1.4 times wider than long with rounded lateral margins which are sharply notched behind middle; structure of

pronotum consisting of irregular lustrous and elevated reliefs; space between these reliefs is rugose covered with extremely fine and short white pubescence; pronotum with slight and shallow praescutellar depression (scutellum is invisible, of course) and with two distinct pit-shaped depressions near the lateral pronotal notch.

Elytra 1.7 times longer than wide at the base, subparallel in anterior half and tapering posteriorly in posterior half; elytra with structure similar to pronotum but reliefs are narrower and less lustrous and intervals between them are wider with more distinct pubescence; reliefs are less elevated and less distinct in apical part; elytra without apical spines and with indistinct epipleural subhumeral tooth.

Legs relatively slender coarsely punctured with long white pubescence; entire ventral side of body also with irregular smooth but not very elevated reliefs; space between them is rugose with fine punctures and short white pubescence; last abdominal segment slightly cut.

Length: 19.5 mm; width: 8.0 mm.

Holotype (♀): SE. Iran, 13 km SSE. Nikshahr (riv.), 8.—9. 4. 1973, loc. no. 152. Coll. Nat. Mus., Prague, cat. no. 26 641.

Male unknown.

Julodella impressithorax sp. n. resembles in its body structure *J. zarudniana* Sem., *J. abyssinica* (Théry) and *J. dilaticollis* Sem. var. *veselyi* Obnb. All these species possess rough dorsal structure consisting of smooth reliefs but these reliefs are less developed than at *J. impressithorax* sp. n. *J. impressithorax* differs from them first of all by narrower pronotum with lateral depressions and notched lateral margins (pronotum of all species mentioned above are 1.6 times wider than long at least, without lateral depressions and notches). Also elytra of these species bear traces of longitudinal keels or tomentose stripes. The further diagnostic character of *J. impressithorax* sp. n. is the puncturation of head which is very dense and rough (see description). Puncturation of head of *J. zarudniana*, *J. abyssinica* and *J. dilaticollis* is very fine and sparse — intervals between punctures are 2—3 times wider than their diameter. Finally *J. impressithorax* sp. n. is more slender and elongate than the other species of this group.

POLYCESTINAE

***Pseudocastalia aegyptiaca* (Gmelin, 1788)**

SW. Iran, Saadatabad, 70 km N. Shiraz, 4. 7. 1970, loc. no. 41, 1 ex.

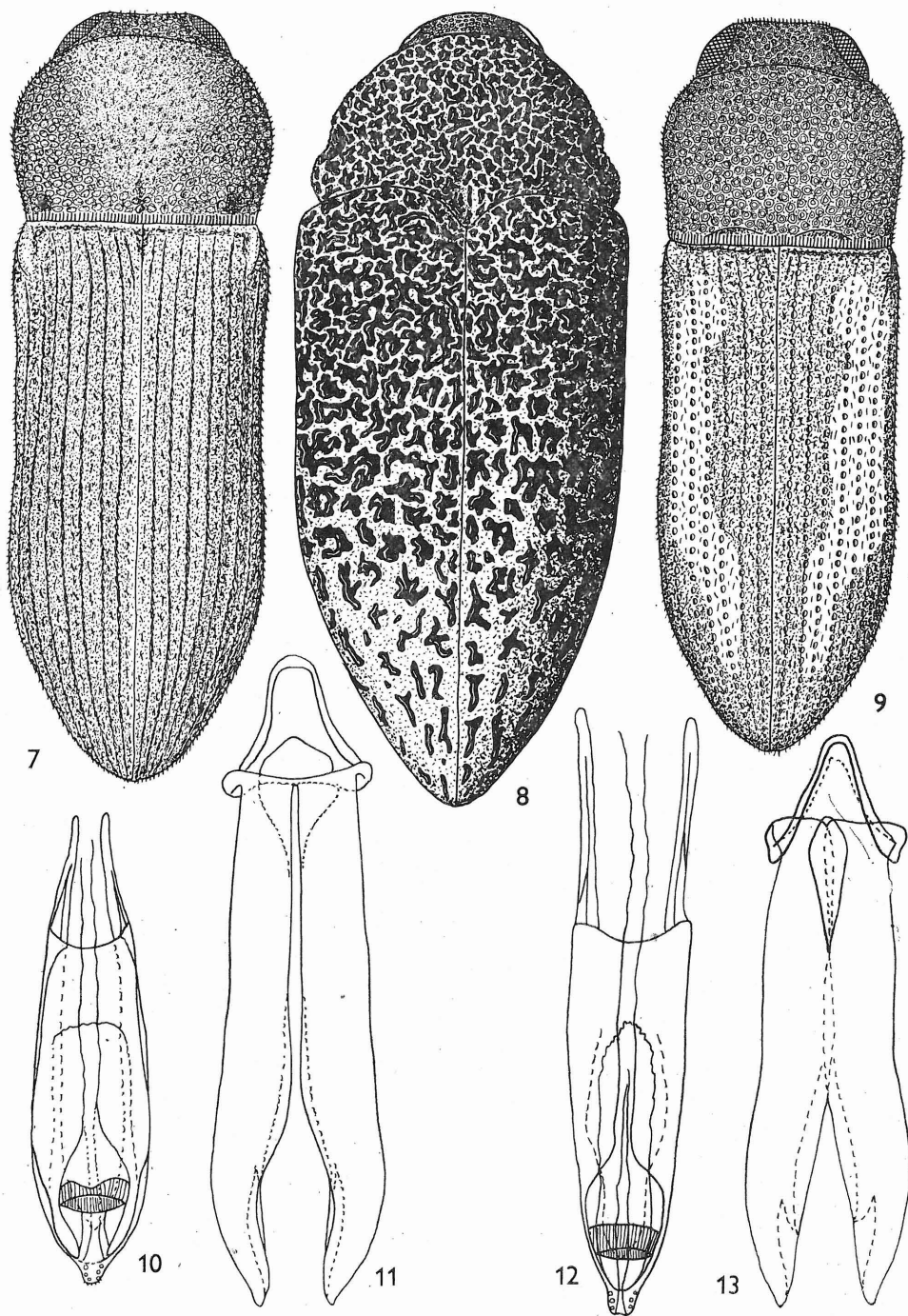
Distribution: Egypt, Arabia, Syria, Iraq, Iran.

***Ptosima flavoguttata* (Illiger, 1803)**

S. Iran, 29 km E. Yasuj, 2300 m, 16.—17. 6. 1973, loc. no. 245, 1 ex.

Distribution: Algeria, Egypt, Arabia, South and Central Europe, Asia minor, Syria, Iraq, Iran.

Table 2. Fig. 7: *Acmaeoderella* (*Euacmaeoderella*) *jezeki* sp. n., holotype, ♂, 3.9 mm; 8: *Julodella impressithorax* sp. n., holotype, ♀, 19.5 mm; 9: *Acmaeoderella* (*Carininota*) *dlabolai* sp. n., holotype, ♂, 6.9 mm; 10: *A. jezeki* sp. n., aedeagus; 11: *A. dlabolai* sp. n., paramerae; 12: *A. dlabolai* sp. n., aedeagus; 13: *A. jezeki* sp. n., paramerae.



ACMAEODERINAE

Acmaeodera (s. str.) **araxicola** Reitter, 1890

S. Iran, Zagros, Sisakht, 2400 m, 13.—15. 6. 1973, loc. no. 240, 2 ex.
Distribution: Transcaucasus, East Turkey, Iraq, Iran.

SW. Iran, Hoseiniyeh, 28 km NNW Andimest, 12.—13. 4. 1977, loc. no. 286, 1 ex.

Distribution: Iran.

Acmaeodera (s. str.) **bushirensis** Obenberger, 1940

SW. Iran, Hoseiniyeh, 28 km NNW. Andimest, 12.—13. 4. 1977, loc. no. 286, 1 ex.

Distribution: Iran.

Acmaeodera (s. str.) **edmundi** Obenberger, 1935

S. Iran, 30 km E. Kazerun, 1300 m, 8.—10. 6. 1973, loc. no. 229, 1 ex.

Distribution: East Turkey, Syria; new record for Iran.

Acmaeodera (s. str.) **wethloi** Obenberger, 1940

S. Iran, 30 km E. Kazerun, 1300 m, 8.—10. 6. 1973, loc. no. 229, 1 ex.;
E. Iran, 1600 m, Mohammadabad, 3.—5. 5. 1973, loc. no. 187, 1 ex.

Distribution: Iran.

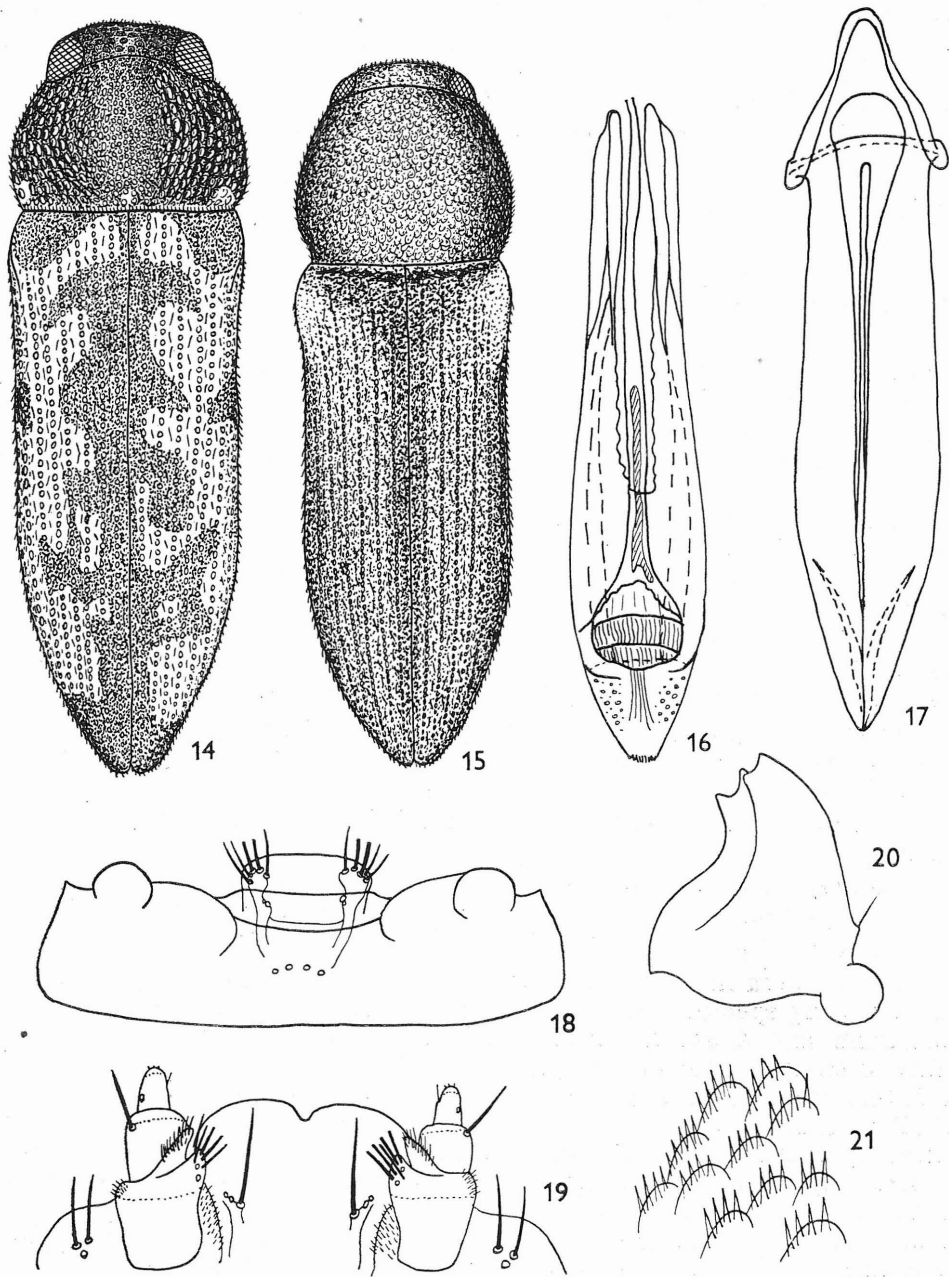
Acmaeodera (**Acmaeotethya**) **hoberlandti** sp. n.

(Tab. III, Fig. 14)

Elongate, flattened species without dorsal bend; black with slight bronze lustre, elytra yellow with irregular brown black longitudinal pattern; pubescence white.

Vertex vaulted, frons flattened; inner margins of eyes parallel in middle part, slightly divergent in anterior and convergent in posterior part; vertex 1.57—1.68 times wider than diameter of eye and 1.07—1.09 times wider than frons between antennal holes; head covered with umbilicate punctures with large central grains and with small excentric micro-punctures bearing hairs; diameter of these punctures 1.0—1.05 times larger than the width of intervals between them; structure of anterior part of frons denser than that of posterior part; anterior margin of clypeus with wide and shallow incision; head with short white and rigid hairs; antennae 1.35—1.54 times longer than vertical diameter of eye; enlarged from the 5th segment; the 4th segment large triangular, the

Table 3: Fig. 14: *Acmaeodera* (*Acmaeotethya*) *hoberlandti* sp. n., holotype, ♂, 6.1 mm; 15: *Acmaeodera* (*Paratethya* subgen. nov.) *mazandarantica* sp. n., holotype, ♀, 4.0 mm; 16: *A. hoberlandti* sp. n., aedeagus; 17: *A. hoberlandti* sp. n., paramerae; 18: larva of *Acmaeoderella* (*Omphalothorax*) *nannorrhopsicola* Volk. et Bílý, epistome and labrum; 19: the same, labiomaxillary complex; 20: the same mandible; 21: the same, inner structure of proventriculus.



2nd oval, the 3rd somewhat longer than the 2nd one, enlarged apically;

Pronotum 1.29—1.32 times wider than long, flattened without medial groove and with very feeble praescutellar and laterobasal pits; lateral pronotal margins regularly rounded, posterior margin straight and anterior margin slightly lobate in middle; lateral pronotal keel thin but distinct invisible from dorsal sight; structure of pronotum consisting of large prolonged umbilicate punctures which compose wrinkled structure on the larger part of pronotum; central part of pronotum (namely praescutellar region) with simple puncturation; posterior angles of pronotum with small yellow spots; entire pronotum covered with short white and recumbent hairs.

Elytra flattened 2.73—2.82 times longer than wide at humeral part; subhumeral epipleural incision small but distinct; elytral rows slightly grooved (namely rows I—III) composed of rounded punctures; intervals slightly vaulted and of a different width: the 2nd and 3rd intervals 3 times wider than rows, other intervals twice wider than rows; all intervals lustrous with fine irregular punctures and with very short white hairs; pattern of elytra composed of irregular longitudinal brown spots on straw-yellow background.

Abdominal sternites black with very small dense punctures; anal sternite sharply rounded at apex.

Aedeagus (Tab. III, Figs. 16, 17) with long and apically slightly enlarged parameres; apodeme very slender and long; apophysis of penis long, laminae narrow, very sclerotized.

Protibiae slightly enlarged apically, claws with tooth at apex; last tarsal segment slightly enlarged apically, of the same length as segments I—IV together.

Length: 6.1—7.6 (holotype 6.1 mm); width: 2.0—2.4 mm (holotype 2.0 mm).

Holotype (♂): S. Iran, 30 km E. Kazerun, 1300 m, 8.—10. 6. 1973, loc. no. 229. Coll. Nat. Mus., Prauge cat. no. 26 642.

Paratype: 1 ex. — the same data.

Acmaeodera hoberlandti sp. n. belongs to the *A. cisti*-group to which the following species also belong: *A. cisti* Woll., *A. acaciae* May., *A. uvarovi* Obnb. and *A. eberti* Cobos (Volkovič, 1979). We have had no possibility to study *A. eberti* but according to Cobos' description (Cobos, 1966) it differs from *A. hoberlandti* sp. n. in many principal characters, first of all by incision of anterior clypeal margin, by umbilicate structure of lateral pronotal margins without wrinkles and by absence of yellow pronotal spots; finally being distributed in Nepal *A. eberti* is unlikely to be found in southern Iran. *A. hoberlandti* sp. n. is also related to *A. uvarovi* from Afghanistan but this species differs distinctly from *A. hoberlandti* sp. n. by form of aedeagus [see Volkovič, 1979: 340, figs. 45, 46], by form of pronotum and by bicolorous (white and brownish) pubescence. *A. cisti* differs from *A. hoberlandti* sp. n. by form of aedeagus, by very deep structure of head and pronotum, by presence of medial

pronotal groove, by long and rigid pronotal pubescence and by very deep elytral structure; also elytral intervals of *A. cisti* are flat and of the same width as rows and elytral pubescence is long (hairs are longer than width of intervals). *A. acaciae* differs from *A. hoberlandti* sp. n. (apart of form of aedeagus) by pattern of elytra (yellow or reddish transverse stripes), by pubescence of elytra (hairs in simple rows are of the same length as width of intervals) and by form and coloration of pronotum which bears lateral yellow stripe.

***Acmaeodera (Acmaeotethya)* sp. near *A. truquii* Ab.**

S. Iran, 2000 m, 17. 6. 1973, loc. no. 246, 1 ex. (♀).

***Paratethya* subgen. n.**

(Tab. II, Fig. 15)

Small, flattened without dorsal bend; clypeus wide with very slightly incurved anterior margin; pronotum rounded without praescutellar depression and without medial groove; pronotum as wide as long; posterior margin of hypomerae without distinct dorsal outgrowth; mesoepimerae narrow and indistinct because of their rough structure; pronotum without concentric wrinkles; epipleural subhumeral notch shallow but distinct; dorsal side covered with lancet-shaped scales and simple hairs; form of aedeagus unknown; ovipositor tubular, rather long.

Subgen. *Paratethya* subgen. nov. resembles subgen. *Acmaeotethya* Volk. by its form of body, by feeble subhumeral epipleural notch and by the form of ovipositor and apical margin of hypomerae but it differs from *Acmaeotethya* by smaller size, elytral pattern and first of all by scale-shaped pubescence. From genera *Acmaeoderella* Cobos and *Xanthremia* Volk. (both with scale-shaped pubescence) it differs by general form of body and pronotum, by feeble subhumeral epipleural notch and by the form of clypeus and ovipositor. From genus *Microacmaeodera* Cobos it differs by form of body and pronotum, by coloration, shorter antennae and also by scale-shaped pubescence.

Type-species of subgenus: *Acmaeodera mazandaranica* sp. n.

***Acmaeodera (Paratethya) mazandaranica* sp. n.**

(Tab. III, Fig. 15)

Small, flattened without dorsal bend, black-bronze, elytra brown with darker basal part and suture; pubescence composed of lancet-shaped scales.

Frons without medial depression inner margins of eyes parallel only in vertical part slightly convergent; vertex without keel 1.91 times wider than diameter of one eye and 1.05 times wider than frons between antennal holes; structure of head consisting of large and rounded punctures with flat bottom without central grains; intervals between these

punctures lustrous; head with recumbent lancet-shaped scales; lateral margins of clypeus slightly enlarged, anterior margin slightly incurved in middle; antennae short (♀!) 1.52 times longer than vertical diameter of eye, slightly enlarged from the 5th segment; the 4th segment distinctly triangular; distal antennal segments semitriangular with obtuse outer spines.

Pronotum rounded slightly flattened without any depressions 1.10 times wider than long; lateral margins regularly rounded with maximum width in posterior third; posterior margin straight, anterior margin widely lobate in middle; lateral pronotal keel very feeble but distinct; lateral parts of pronotum with oval punctures with flat bottom; these punctures are larger and more distinct towards the centre of pronotum; disc of pronotum with indistinct and shallow rasp-like punctures and with irregular wrinkles on lustrous background; pronotal pubescence consisting of recumbent lancet-shaped scales.

Elytra flattened 2.72 times longer than wide at base; lateral margins slightly divergent in humeral part, parallel in middle part and widely arched in posterior third; apex of each elytron widely rounded with fine serration; subhumeral epipleural notch feeble but distinct; elytral rows composed of small rounded punctures which are connected each other in the first three rows; these three rows are somewhat grooved; intervals flattened lustrous or with very feeble microstructure 2.5–3.0 times wider than rows, each of them bearing large but shallow punctures; elytral pubescence consisting of lancet-shaped scales forming rows.

Anterior margin of prosternum slightly incurved feebly margined, reaching anterior pronotal angles; prosternum with small umbilicate punctures; propleurae, mesoepisterna, lateral margins of metasternum, coxal covers and lateral margins of abdominal sternites covered with large punctures with flat bottom and with large oval or rounded scales; medial part of sternites with indistinct structure and microstructure; anal sternite flattened and regularly rounded apically.

Form of aedeagus unknown; ovipositor tubular resembling that of subgenus *Acmaeotethya*.

Hind coxae without tooth, protibiae normal, claws with long tooth apically; last tarsal segment slightly longer than segments I–IV together; tarsal brushes of hairs small, divided medially on the 4th segment of the first tarsae.

Length: 4.0 mm; width: 1.1 mm.

Holotype (♀): N. Iran, prov. Mazandaran, Shaki, 1. 8. 1970, loc. no. 80. Coll. Nat. Mus., Prague, cat. no. 26 643.

A. mazandaranica sp. n. resembles species of *A. truquii*-group (subgen. *Acmaeotethya*) but it differs from them by small body, coloration, elytral pattern and by scale-shaped pubescence.

***Xantheremia philistina* (Marseul, 1865)**

S. Iran, 6 km W. Geno, 7.–9.5. 1977, loc. no. 323, 1 ex.; S. Iran,

Golshan env., 24. 4. 1977, loc. no. 310, 1 ex.; S. Iran, 55 km S. Hadjiabad, 2000 m, 10. 5. 1973, loc. no. 195, 9 ex.

Distribution: Syria, Arabia; new record for Iran.

***Xantheremia volkovitshi* sp. n.**

(Tab. IV, Fig. 22)

Small and elongate bronze species with metallic lustre; elytra yellow with black-brown suture and irregular spots which are sometimes connected longitudinally; entire body covered with narrow needle-like scales.

Frons with wide and shallow depression, inner margins of eyes slightly convergent vertically and slightly bent in middle part; vertex with medial keel 1.61—2.00 times wider than diameter of eye and 1.08—1.21 times wider than frons between antennal holes; head with fine microstructure and with dense umbilicate punctures covered with fine trichoid scales; anterior margin of clypeus deeply incurved; antennae typical for *X. koenigi*-group: 1.26—1.55 times longer than vertical diameter of eye and enlarged from the 5th segment.

Pronotum vaulted bell-shaped 1.45—1.68 times wider than long with maximum width at base, somewhat narrower than elytra; lateral margins regularly arcuated and convergent anteriorly: posterior margin straight, anterior margin lobate medially; lateral pronotal keels very feeble, interrupted or absent; structure of pronotum consisting of simple punctures on disc and of rasp-like punctures and prolonged wrinkles laterally; rasp-like punctures on the very margin forming bent rows; entire pronotum covered with needle-shaped or feeble lancet-shaped scales.

Elytra narrow 2.34—2.67 times longer than wide at humeral part, parallel straightly tapering in posterior third; epipleural subhumeral notch feeble but distinct; elytral rows consisting of large and rounded punctures, intervals flat and very variable in their width: 1—2 times wider than rows of punctures; intervals with fine microstructure each interval bearing a row of fine punctures and recumbent lancet-shaped scales; elytra yellow with brown suture, humeral swellings and irregular spots on intervals IV—IX; these brown spots sometimes reduced or longitudinally connected.

Ventral side (except of propleuras) with dense umbilicate and rasp-like punctuation; anal sternite regularly rounded at apex, ventral scales not condensed; claws with prolonged tooth.

Aedeagus (Tab. IV, Figs. 24, 25) with prolonged tegmen, paramerae distinctly enlarged in the first third, their ventral medial margins very enlarged inwards; apophysis of aedeagus narrow and distinctly bent; ovipositor (Tab. IV, Fig. 29) with widely inserted styli with almost straight margin between them; dorsal hemisternites thin, ventral ones forming pentagonal plate; lateral parts of ovipositor wing-shaped.

Length: 3.5—4.8 mm (holotype 3.9 mm); width: 1.1—1.6 mm (holotype 1.2 mm).

Holotype (♂): C. Iran, Rafsanjan, 22. 3. 1973, loc. no. 131, reared from *Alhagi persarum*. Coll. Nat. Mus., Prague, cat. no. 26644.

Allotype (♀): the same data.

Paratypes (42 ex): the same data.

Further material (more or less damaged) not included in paratypes: 12 specimens, the same data.

X. volkovitshi sp. n. belongs to *X. koenigi*-group. Species belonging to this group are very similar in morphological characters and they are distinguishable only according to the form of their genitalia (Volkovič, 1978). *X. volkovitshi* sp. n. is related to *X. steinbergi* (Volk.) and these two species differ from each other in the following characters:

X. volkovitshi sp. n.

Aedeagus

Apophysis of penis narrow their apex obtuse (Tab. IV, Fig. 24)

Ovipositor

Distal margin almost straight.

Outer margins of ventral hemisternites angulated (Tab. IV, Fig. 29).

X. steinbergi (Volk.)

Apophysis of penis wide their apex pointed (see Volkovič, 1978: 38, f. 10).

Distal margin distinctly lobate.

Outer margins of ventral hemisternites rounded (see Volkovič, 1978: 40, f. 18).

***Xantheremia jelineki* sp. n.**

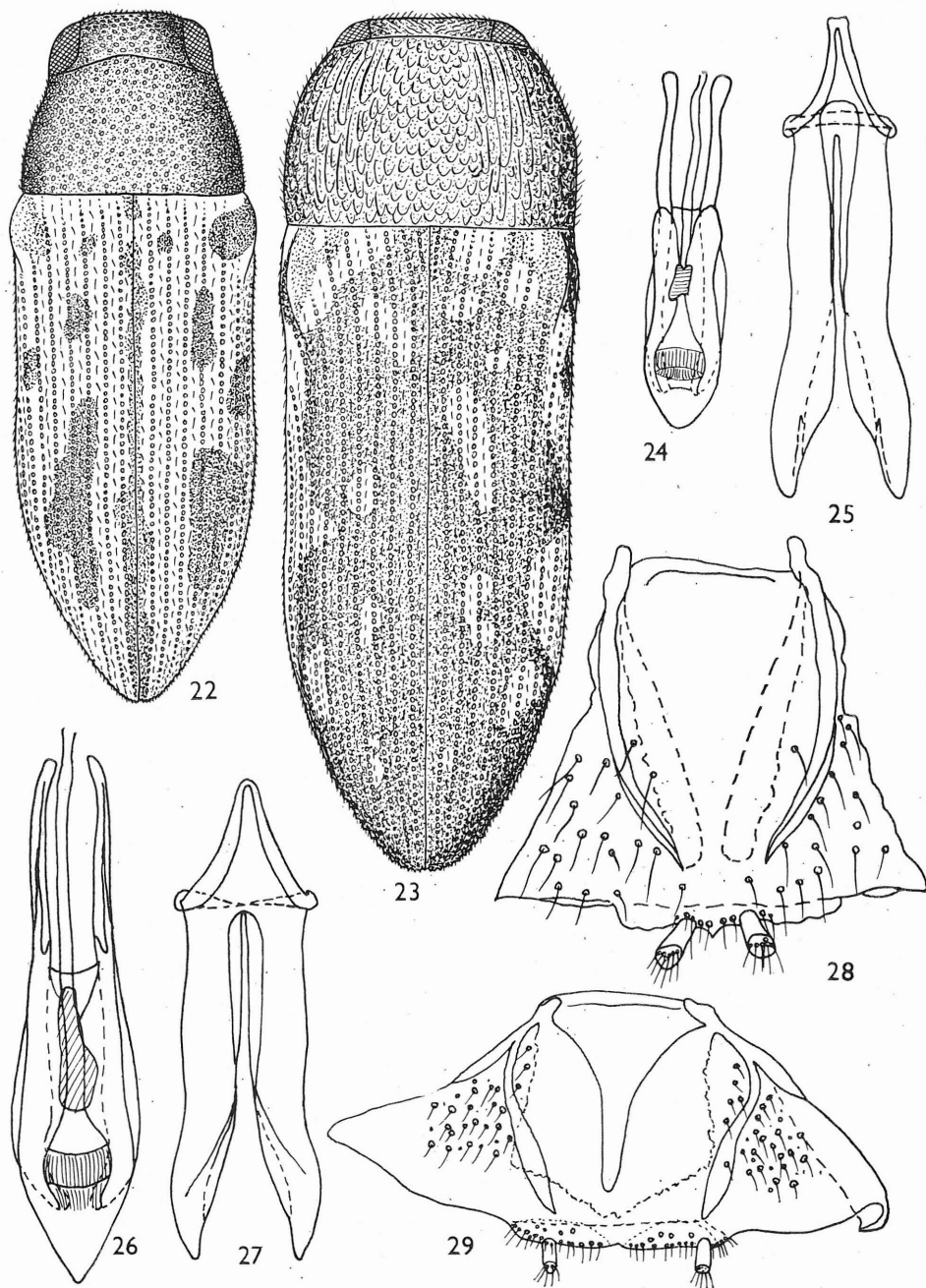
(Tab. IV, Fig. 23)

Small slightly flattened species with distinct dorsal bend; black, lustrous, elytra dark brown with irregular yellow spots; pubescence consists of narrow or slightly lancet-shaped scales.

Inner margins of eyes indistinctly convergent anteriorly, slightly incurved in middle part; width of vertex 1.50—1.63 times wider than diameter of eye and 1.11—1.13 times than frontal width between antennal holes; vertex with feeble keel which reaches the line connecting posterior margins of eyes; frons slightly depressed in anterior part; vertex and posterior part of frons with structure consisting of fine concentric grooves with indistinct punctures while the anterior part of frons bears dense umbilicate puncture with large central grains; clypeus slightly and feebly incurved; antennae 1.40—1.47 times longer than vertical diameter of eye; enlarged from the 5th segment; the 4th segment triangular.

Pronotum vaulted without medial depression and without distinct basal pits; lateral pronotal margins almost parallel in the first third and regularly rounded in posterior two thirds; posterior pronotal margin straight, anterior margin very slightly lobate in middle; lateral pronotal keel thin but complete; pronotum 1.39—1.42 times wider than long with deep concentric grooves (except central part) containing remnants of grains; central part of pronotum with feeble indistinct punctures; pro-

Table 4. Fig. 22: *Xantheremia volkovitshi* sp. n., holotype, ♂, 3.9 mm; 23: *Xantheremia jelineki* sp. n., holotype, ♂, 5.1 mm; 24: *Xantheremia volkovitshi* sp. n., aedeagus; 25: *X. volkovitshi* sp. n., paramere; 26: *X. jelineki* sp. n., aedeagus; 27: *X. jelineki* sp. n., paramere; 28: *X. jelineki* sp. n., ovipositor; 29: *X. volkovitshi* sp. n., ovipositor.



notal pubescence consisting of feebly lancet-shaped scales not covering basal structure.

Elytra 2.38—2.41 times longer than wide at humeral part; epipleural subhumeral notch feeble but distinct; elytral punctures (in rows) small and oval or rounded connecting with each other in posterior part; elytral intervals flat and lustrous 2—3 times wider than rows of punctures with large shallow punctures; intervals IV—IX with dense transverse wrinkles; the ninth interval slightly elevated in posterior third; elytra dark brown with irregular merged yellow spots; elytral pubescence consisting of simple lines of lancet-shaped scales.

Ventral side black without metallic lustre, with umbilicate punctures which are more feeble at middle part of sternites; anal sternite sharply rounded apically with fine groove which is parallel with posterior margin; lateral abdominal scales widely lancet-shaped, medial ones slightly lancet-shaped.

Aedeagus (Tab. IV, Figs. 26, 27) with distally enlarged and apically sharply rounded paramerae; apex of penis simply pointed, laminae rather robust. Ovipositor (Tab. IV, Fig. 28) with lateral parts slightly developed, not wing-shaped; styli closely inserted, ventral haemisternites narrow.

Legs black with sparse white trichoidal scales; metatibiae with outer yellowish bristles; claws with sharp tooth not reaching the apex of claws.

Length: 5.1—6.8 mm (holotype 5.1 mm); width: 1.7—2.8 mm (holotype 1.7 mm).

Holotype (♂): S Iran, Isin, 26. 5. 1973, loc. no. 213; on flowers of *Echinops macrophyllus*. Coll. Nat. Mus., Prague, cat. no. 26645.

Allotype (♀): the same data.

Paratypes: 1♀, 1♂, the same data; 8♂♂, 4♀♀: E. Iran, 55 km S. Hadjiabad, 2000 m, 10. 5. 1973 loc. no. 195.

Xantheremia jelineki sp. n. belongs to the *X. flavipennis-group* (Volkovič 1979) differing from all species of this group by black body without metallic lustre, by reduced yellow elytral pattern, thin lancet-shaped scales which do not cover the letaral structure of pronotum, by very closely inserted styli of ovipositor and by general form of ovipositor (the form of ovipositor is unknown in *X. pantherina* Bílý); the further typical characters of *X. jelineki* sp. n. are the form of tegmen and robust laminae of aedeagus.

***Acmaeoderella* (s. str.) *serricornis* (Abeille, 1900)**

S. Iran, Mian Jangal, 30. 5.—5. 6. 1973, loc. no. 223, 1 ex.; N. Iran, 2400 m, 8 km NE. Ziarn, 10.—16. 7. 1977, loc. no. 400, 1 ex.

Distribution: Transcaucasus; new record for Iran.

***Acmaeoderella* (s. str.) *elbursi* (Obenberger, 1934)**

N. Iran, 40 km S. Tehran, 7. 4. 1977, loc. no. 278, 1 ex.; S. Iran, Asalooyah, 23. 4. 1977, loc. no. 308, 1 ex.

Distribution: Transcaucasus, Iran.

***Acmaeoderella (Carininota) zarudniana* Volkovič, 1977**

S. Iran, Isin, 26. 5. 1973, loc. no. 213, 1 ex.; S. Iran, 400 m, 6 km W. Geno, 7.—9. 5. 1977, loc. no. 323, 2 ex.; S. Iran, Derpehan, 12 km E. Senderk, 11.—12. 5. 1977, loc. no. 326, 1 ex.; S. Iran, 15. 5. 1977, 17 km NE. Rudan, road tunnel no. 7, loc. no. 331, 1 ex.; S. Iran, Mian Jangal, 30. 5.—5. 6. 1973, loc. no. 223, 1 ex.; S. Iran, 12 km NW. Minab, 18.—19. 5. 1973, loc. no. 202, 4 ex.; N. Iran, 10 km S. Neizar, 25. 6. 1973, loc. no. 259, 1 ex.; E. Iran, 55 km S. Hadjiabad, 2000 m, 10. 5. 1973, loc. no. 195, 2 ex.

Distribution: South Turcmenia, Iran.

***Acmaeoderella (Carininota) dlabolai* sp. n.**

Prolonged rather slender species with feeble dorsal bend; black with lead lustre, elytra brown black with bent longitudinal yellow stripe on intervals II—VIII; dorsal side covered with white lancet-shaped scales, ventral side with widely lancet-shaped scales covering entire ventral side; pronotum with distinct basal keels.

Head wide, vertex vaulted with slight longitudinal keel; frons flattened in anterior part and slightly grooved above antennal pits; inner margins of eyes slightly convergent anteriorly, vertex 1.65 times wider than width of eye and 1.09 times wider than width of frons between antennal holes; clypeus very narrow deeply incurved anteriorly; structure of head consisting of rounded and oval umbilicate punctures with rounded central grains; width of intervals between these punctures is one half of diameter of these punctures, intervals lustrous with very indistinct microstructure; head covered with uniform white narrowly lancet-shaped scales directing anteriorly; antennae relatively long (♂), 1.56 times longer than vertical diameter of eye, enlarged from the 5th segment; 2nd segment prolonged, 3rd one oval, 4th segment slightly enlarged apically and the 5th one triangular with sharp outer point, distinctly wider than the 4th segment; segments VI—XI triangular with obtuse outer point, 11th segment cut at apex.

Pronotum prolonged 1.24 times wider than long with maximum width in anterior third; dorsal surface regularly vaulted (seen laterally) without anterior elevation (x subgen. *Omphalothorax*); anterior pronotal margin arcuate, posterior one straight; basal pronotal keels low reaching from the level of the 2nd elytral groove to the basal pronotal pits; the highest part of these keels against the 3rd elytral groove; lateral pronotal depressions indistinct, punctiform; praescutellar depression well developed triangular prolonged anteriorly in the form of feeble medial groove; lateral pronotal keels absent; pronotal structure consisting of umbilicate punctures forming laterally a network of shallow rounded cells; punctures in middle part of pronotum are smaller and more sparse than those at lateral margins; anterior part of pronotum with small umbilicate punctures; pronotum covered with narrow lancet-shaped scales which are narrower in the middle part of pronotal disc than at lateral margins; anterior prosternal margin slightly incurved and

marginated, reaching anterior angles of pronotum; prosternum with fine and deep punctures, hypomeras as well as meso- and metasternum with rounded umbilicate punctures.

Elytra prolonged 2.54 times longer than wide at base; lateral margins slightly tapering behind humeral swellings and slightly enlarged in posterior third; apex of elytra narrowly rounded; humeral swellings small, slightly projecting; subhumeral notch distinct; posterior part of lateral margins slightly but sharply serrate; elytral grooves consisting of deep rounded and oval punctures which are fused longitudinally in sutural grooves; intervals flat 2—3 times wider than grooves, the 3rd interval distinctly enlarged in posterior third; 9th interval slightly elevated with row of small and sharp teeth; all intervals with large shallow punctures and with dense microstructure; elytra brown black, each elytron with arched yellow longitudinal stripe; these stripes reach from humeral swellings (2nd interval) almost to apex (8th interval); intervals bear white lancet-shaped scales.

The first abdominal sternite with umbilicate punctures which are posteriorly changed to rasp-like ones; anal sternite regularly rounded apically; whole ventral side covered with recumbent lancet-shaped scales covering entirely ventral surface; metacoxas with dense umbilicate punctures and scales, femora and tibiae with narrow white scales; metatibiae with row of brown bristles; 1st and 2nd tarsal segments with small brushes of hairs, 3rd and 4th segments with larger and denser ones; claws with tooth at base.

Aedeagus Tab. II, Figs. 11, 12.; female unknown.

Length: 6.9 mm; width: 2.0 mm (holotype) and 7.3 mm and 2.3 mm (paratype).

Holotype (♂): S. Iran, 400 m, 6 km R. Geno, 7.—9. 5. 1977, loc. no. 323, Coll. Nat. Mus., Prague, cat. no. 26646.

Paratype (♂): E Iran, 55 km S. Hadjiabad, 2000 m, 10. 5. 1973, loc. no. 195.

Acmaeoderella dlabolai sp. n. belongs to subgen. *Carininota* due to its basal pronotal keels and pronotal structure although it resembles species of subgen. *Omphalothorax* by its body-shape and species of subgen. *Liogastria* and *Acmaeoderella* s. str. by its coloration. It differs from species of subgen. *Omphalothorax* by its cylindrical body, shape of pronotum and by pronotal structure (anterior part of pronotum elevated and pronotal structure consisting of deep cells in *Omphalothorax*). From subgenera *Acmaeoderella* s. str. and *Liogastria* it differs by presence of pronotal keels. *A. dlabolai* sp. n. differs from other species of subgen. *Carininota* by its prolonged narrow body prolonged pronotum, uncommon elytral pattern and by the form of aedeagus.

***Acmaeoderella (Carininota) flavofasciata tschitscherini* (Semenov, 1895)**

N. Iran, 3 km N. Dasht Golestan forest, 18. 6. 1977, 960 m, loc. no. 375, 3 ex.

Distribution: Central Asia; new record for Iran.

Acmaeoderella (Omphalothorax) nannorrhopsicola Volkovič et Bílý, 1979

SE. Iran, 21 km SW. Saráván, 29. 3. 1973, loc. no. 140, 1 ex.

Distribution: Beloudjistan.

Description of larva: Body yellowish-white with moderately enlarged thoracic part; pronotal and prosternal grooves yellowish equal and indistinct; epistome (Tab. III, Fig. 18) very wide with obtuse posterior angles; epistomal sensory pits almost in one line; labrum (Tab. III, Fig. 18); mandibles (Tab. III, Fig. 20) relatively slender with four apical teeth; labiomaxillary complex (Tab. III, Fig. 19) wide and robust, galea long with long and dense bristles; praemental bristles very long, praementum deeply notched in middle of the anterior margin (Tab. III, Fig. 19); spiracula uniforia; inner structure of proventriculus (Tab. III, Fig. 21) consisting of oblique rows of knolls each of them bearing 3—5 large spines.

Length of body of the last instar (in 75% alcohol) 9.5 mm.

Material: Iran, Nararabad, Kazog, 5. 3. 1973, ex *Nannorrhops ritchieana*, loc. no. 140, 2 ex.

Acmaeoderella (Omphalothorax) adpersula arabica (Cobos, 1963)

S. Iran, Bilai, 23.—24. 5. 1973, loc. no. 209, 4 ex.; E. Iran, 55 km S. Hadjiabad, 2000 m, 10. 5. 1973, loc. no. 195, 1 ex.; reared from *Prosopis spicigera* (loc. no. 209).

Distribution: Arabia, Iraq; new record for Iran.

Acmaeoderella (Euacmaeoderella) vetusta (Ménétriés, 1823)

S. Iran, Mian Jangal, 30. 5.—5. 6. 1973, loc. no. 223, 3 ex.; S. Iran, Maharlu, 5.—6. 6. 1973, loc. no. 227, 1 ex.; NW. Iran, 26 km SSE. Khoy, 6. 7. 1973, loc. no. 267, 21 ex.; Turkey, E. Anatolia, Gevas, 8. 7. 1973, 1 ex.

Distribution: Greece, Asia Minor, Transcaucasus, Iraq, Iran.

Acmaeoderella (Euacmaeoderella) boryi (Brullé, 1823)

S. Iran, 29 km E. Yasuj, 2300 m, 16.—17. 6. 1973, loc. no. 245, 3 ex.; N. Iran, 2400 m, 8 km NE. Ziaran, 10.—16. 7. 1977, loc. no. 400, 1 ex.

Distribution: Greece, Asia Minor, Syria, Iraq, Transcaucasus, Iran.

Acmaeoderella (Euacmaeoderella) gibbulosa (Ménétriés, 1823)

N. Iran, 3 km N. Dasht Golestan forest, 18.—19. 6. 1977, loc. no. 375, 27 ex.

Distribution: Transcaucasus, East Turkey, Iraq, Iran.

Acmaeoderella (Euacmaeoderella) safavii Volkovič, in press

S. Iran, 28 km N. Masíri, 1650 m, 12. 6. 1973, loc. no. 236, 2 ex. (paratypes).

Distribution: described from Iran.

***Acmaeoderella (Euacmaeoderella) xerxes* (Obenberger, 1916)**

SE. Iran, 55—78 km NNW. Tis, Pish mant riv., 8. 4. 1973, loc. no. 151, 1 ex.

Distribution: Iran.

***Acmaeoderella (Euacmaeoderella) nivetecta* Volkovič, 1976**

S. Iran, Borazjan, 19. 4. 1977, loc. no. 299, 1 ex.

Distribution: Central Asia (Turkmenia); new record for Iran.

***Acmaeoderella (Euacmaeoderella) jezeki* sp. n.**

(Tab. II, Fig. 7)

Prolonged slightly flattened species with feeble dorsal bend; bronze with slight copper lustre, unicolorous; whole body covered with white lancet-shaped scales, which cover entire ventral side.

Frons very narrow widely grooved, eyes sharply projecting beyond the outline of head and slightly convergent anteriorly; vertex 1.22—1.33 times wider than width of eye and 1.16—1.18 times wider than width of frons between antennal holes; clypeus widely and deeply incurved anteriorly; structure of head consisting of small umbilicate punctures with distinct grains and with dense microstructure on the bottom; intervals between punctures on vertex 1.5—2.0 times wider than their diameter; frons with somewhat denser puncturation; head covered with very short and indistinct white scales; antennae rather short (♂) 1.30—1.37 times longer than vertical diameter of eye, enlarged from the 5th segment; 2nd segment irregularly rounded, 3rd and 4th segments of the same shape and 5th segment triangular with sharp outer point; segments VI—IX transverse, 11th segment oval.

Pronotum feebly vaulted (seen laterally) 1.27—1.33 times wider than long with maximum width at anterior third; anterior pronotal margin feebly arcuate, posterior margin straight; lateral pronotal keels absent; lateral depressions indistinct, praescutellar depression feeble; pronotum with indistinct medial longitudinal groove; basal part and posterior angles of pronotum with structure consisting of deep cells with lustrous bases; anterior part and especially disc of pronotum with small sparse umbilicate punctures with lustrous grains and with dense microstructure on bottom; lateral pronotal margins with recumbent lancet-shaped scales, disc with thin trichoidal scales; prosternum slightly incurved anteriorly, feebly margined and reaching to anterior angles of pronotum; prosternum with deep punctures with lustrous base, hypomerae with microstructure and with shallow umbilicate punctures; meso- and metasternum with shallow punctures with lustrous bases.

Elytra prolonged and slightly flattened 2.43—2.54 times longer than wide at humeral part; lateral margins distinctly convergent anteriorly in the first third and slightly enlarged in posterior third; apex of elytra narrowly rounded with indistinct serration; humeral swellings rather projecting, subhumeral epipleural notch deep; elytral grooves composed

of small rounded punctures which are fused longitudinally in sutural grooves and which are indistinct in rough basal structure at humeral part of elytra; intervals equally flattened 1.5—2.5 times wider than elytral grooves; 9th interval slightly elevated in posterior third; intervals with shallow punctures and with microstructure which is very rough in basal part of elytra; elytral scales lancet-shaped recumbent and distributed in rows.

Abdomen with indistinct dense punctures and with fine microstructure; anal sternite regularly rounded apically (♂) with slight transverse depression; entire ventral side with wide lancet-shaped scales entirely covering ventral side.

Metacoxae with small punctures with lustrous bases entirely covered with scales; femora and tibiae with thin scales and white hairs; metatibiae with row of yellowish bristles; tarsal brushes of hairs indistinct; claws with sharp basal tooth.

Aedeagus: Tab. II, Figs. 11, 13; female unknown.

Length: 3.9 and 4.5 (holotype) mm; width: 1.2 and 1.4 (holotype) mm.

Holotype (♂): N. Iran, 2400 m, 8 km NE. Ziaran, 10.—16. 7. 1977, loc. no. 400. Coll. Nat. Mus., Prague, cat. no. 26 647.

Paratype (♂). the same data.

Acmaeoderella jezeki sp. n. belongs according to form of aedeagus and form of antennae to subgen. *Eucmaeoderella* although it resembles some species of subgen. *Acmaeoderella* s. str. (namely *A. serricornis* Ab.). Unfortunately the principal subgeneric character — ovipositor is unknown. *A. jezeki* sp. n. differs from species *A. dubia* and *A. gibbulosa* groups by its elongate body with feeble dorsal bend and by structure of pronotum (resembling that of *A. obscura* Reitt) but with dense puncturation. It resembles *A. stricta* (Ab.) but it differs from it by structure of head which is composed of umbilicate punctures (simple cells in *A. stricta*), by more complicated pronotal structure and by short antennae of male. It differs from *A. nigrevitis* Volk., *A. serricornis* (Ab.), *A. erina-ceiformis* (Obnb.) and *A. beduina* Cobos (all with similar structure of head) also by more complicated pronotal structure and by shorter antennae of male as well as by coloration and by form and distribution of scales.

CHALCOPHORINAE

***Chalcophora detrita* Klug, 1829**

Turkey, S. Anatolia, Gazipasa, 13. 7. 1973, 6 ex.

Distribution: Asia Minor, Syria.

***Chalcophorella* (*Stigmatophorella*) *bagdadensis freyi* Obenberger, 1942**

S. Iran, Mian Jangal, 30. 5.—5. 6. 1973, loc. no. 223, 10 ex.; S. Iran, 30 km E. Kazerun, 1300 m, 8.—10. 6. 1973, loc. no. 229, 1 ex.

Distribution: Iran.

***Chlorophorella gerlingi* Descarpentries, 1973**

C. Iran, Fahraj, 2. 6. 1977, loc. no. 354, 3 ex.; S. Iran, 220 m, Senderk, 12.—13. 5. 1977, loc. no. 327, 3 ex.; S. Iran, Konardan, 36 km E. Gav Band, 23.—24. 4. 1977, loc. no. 309, 1 ex.; all specimens collected by beating of *Tamarix* sp.

BUPRESTINAE

***Psiloptera (Lampetis) argentata* Mannerheim, 1837**

S. Iran, Khormuj, 20. 4. 1977, loc. no. 302, 1 ex.; S. Iran, Asalooyah, 23. 4. 1977, loc. no. 308, 3 ex.; SE. Iran, Rask, vall. r. Sarbáz, 3.—4. 4. 1973, loc. no. 146, 2 ex.; C. Iran, 2000 m, 12 km NW. Dowiarabad, 21. 5. 1977, loc. no. 341, 2 ex.; C. Iran, Tehran-Evin, 1700 m, 27. 6. 1970, loc. no. 31, 1 ex.

Distribution: Transcaucasus, Central Asia, East Turkey, Iraq, Iran.

***Capnodis tenebrionis* (Linnaeus, 1758)**

W. Iran, Zayandeh Rud, 2200 m, 50 km W. Kuhrang, 1. 7. 1970, loc. no. 170, 4 ex.; NE. Iran, Mashhad, 9.—11. 6. 1977, loc. no. 362, 1 ex.; E. Iran, 13 km WSW. Kerman, 29. 4. 1973, loc. no. 182, 1 ex.; N. Iran, Behshahr, 25. 7. 1970, loc. no. 72, 1 ex.

Distribution: Mediterranean, Central Europe, Caucasus, Iraq, Iran, Syria.

***Capnodis tenebricosa aurosparsa* Abeille, 1891**

S. Iran, 29 km E. Yasuj, 2300 m, 16.—17. 6. 1973, loc. no. 245, 2 ex.; N. Iran, 12 km NW. Hesarak, 5. 3. 1973, loc. no. 122, 1 ex.; NE. Iran, Mashhad, 9.—11. 6. 1977, loc. no. 362, 1 ex.

Distribution: Iran, Afghanistan.

***Capnodis miliaris miliaris* (Klug, 1829)**

E. Iran, Deh Bakri, 1700—1750 m, 30. 4.—3. 5. 1973, loc. no. 186, 1 ex.; SM. Iran, Shushtan, 13. 4. 1977, loc. no. 284, 1 ex.; N. Iran, Tehran-Evin, Alborz, 1700—2000 m, 2.—7. 4. 1977, loc. no. 276, 3 ex.; NE. Iran, Dashhad, 9.—11. 6. 1977, loc. no. 362, 3 ex.; NE. Iran, Kalat, 17. 6. 1977, loc. no. 371, 1 ex.; C. Iran, Ferdows-e Esfandageh, 21. 5. 1977, loc. no. 340, 1 ex.; S. Iran, Fasa, 9. 7. 1970, loc. no. 50, 3 ex.

Distribution: Asia Minor, Syria, Iraq, Iran, Central Asia.

***Capnodis excisa* Ménétériés, 1848**

S. Iran, 16 km N. Jask, 22.—23. 5. 1973, loc. no. 208, 18 ex.; E. Iran, 1800—2000 m, Baune Charehar, 8. 5. 1973, loc. no. 191, 2 ex.; SE. Iran, Sanus, 13—47 km N. Espakeh, 11. 4. 1973, loc. no. 156, 2 ex.; S. Iran, Jalabi, 16. 5. 1973, loc. no. 199 b, 2 ex.; S. Iran, 12 km NW. Minab, 18.—19. 5. 1973, loc. no. 202, 25 ex.; SE. Iran, Tis, 6.—7. 4. 1973, loc. no. 150, 2 ex.; almost all specimens collected on *Calligonum commosum*.

Distribution: Central Asia, Iraq, Iran, Arabia.

***Capnodis carbonaria* (Klug, 1829)**

S. Iran, Mian Jangal, 30. 5.—5. 1. 1973, loc. no. 223, 23 ex.; S. Iran, Zagros, Sisakht, 2400 m, 13.—15. 6. 1973, loc. no. 240, 2 ex.; SW Iran, Bachtegan, 30 km E. Sahlabad, 7. 7. 1970, loc. no. 47, 1 ex.; S. Iran, Komehr, 2000 m, 17. 6. 1973, loc. no. 246, 1 ex.; C. Iran, Chasmeh-ye Sargaz, 1650 m, 20.—21. 5. 1977, loc. no. 339, 3 ex.; NE. Iran, Kuh-e Binalud, S. slope, 15 km NE. Nishabur, 13.—15. 6. 1977, loc. no. 365, 1 ex.; S. Iran, Kuh-e Geno Mts., 400—600 m, 1.—4. 5. 1977, loc. no. 321, 2 ex.; S. Iran, Sisakht, Dena, 2500—3000 m, 13.—11. 6. 1973, loc. no. 231, 1 ex.; S. Iran, Bishapur, Tange Chogan, 1050—1200 m, 10.—11. 6. 1973, loc. no. 232, 1 ex.; E. Iran Mohammadabad, 1600 m, 3.—5. 5. 1973, loc. no. 189, 1 ex.; most of specimens collected by beating of *Amygdalus scoparia*.

Distribution: Asia Minor, Transcaucasus Syria, Iraq, Iran.

***Capnodis anthracina* (Fischer, 1830)**

E. Iran Deh Bakri, 1700—1750 m, 30. 4.—3. 5. 1973, loc. no. 186, 4 ex.; E. Iran, Taftan, Tamandan, 2100 m, 17.—18. 4. 1973, loc. no. 167, 6 ex.; S. Iran, Kuh-e Geno Mts., 400—600 m, 1.—4. 5. 1977, loc. no. 321, 1 ex.; SE. Iran, 25 km W. Ghasre-Ghand, 9.—10. 4. 1973, loc. no. 153, 1 ex.

Distribution: Transcaucasus, East Turkey, Iran.

***Capnodis hauseri* Obenberger, 1926**

S. Iran, Zagros, Sisakht, 2400 m, 13.—15. 6. 1973, loc. no. 240, 6 ex.; S. Iran, Kuh-e Geno Mts., 400—600 m, 1.—4. 5. 1977, loc. no. 321, 1 ex.; E. Iran, Rafsanjan, 26.—28. 4. 1973, loc. no. 181, 1 ex.; all material collected on *Pistacia atlantica mutica*.

Distribution: Iran.

***Cyphosoma lawsoniae orientalis* ssp. n.**

Small brightly bronze and mat species with rough elytral structure; body somewhat more parallel than that of the other subspecies, pronotal structure fine and homogenous; praescutellar pit very fine, pronotum narrower than elytra; there are no essential differences in form of male genitalia of all subspecies. All differential characters of this new subspecies are given in the following key.

Length: 9.6—11.0 mm (holotype 11.0 mm); width: 4.3—4.8 mm (holotype 4.3 mm).

Holotype (♂): SE. Iran, Bahu Kalat, 3.—4. 4. 1973, loc. no. 147.

Paratype (♂): SE. Iran, 55—78 km NNW Tis, Pish mant riv., 8. 4. 1973, loc. no. 151.

1 [6] Elytra lustrous with very fine rows of punctures; pronotal puncturation rough with irregular intervals between punctures or with small smooth reliefs; longitudinal elytral depressions with white pubescence; bronze or brown black subspecies sometimes with violet lustre

- 2 [3] Pronotum with coarse and sparse puncturation and with three small and smooth reliefs; anterior pronotal margin deeply bisinuous; body shorter and more brightly bronze; 10.0—15.0 mm; Sahara, Ennedi Mts *C. lawsoniae ennediana* Desc. et Mateu
- 3 [2] Pronotum without smooth reliefs and with finer puncturation; anterior pronotal margin feebly bisinuous; body more elongate, dark bronze or brown black with slight violet lustre
- 4 [5] Slender subsepcies with regularly tapering elytra, dark bronze without violet lustre; elytra less lustrous their lateral margins slightly incurved before apex; 9.5—18.5 mm; Egypt, Algeria, Spain, Corsica, Sardinia *C. lawsoniae lawsoniae* Chevrolat
- 5 [4] More robust and vaulted subspecies with parallel elytra, black brown with violet lustre; elytra very lustrous their lateral margins regularly rounded before apex; 12.0—20.0 mm; Iraq *C. lawsoniae kalalae* Obenberger
- 6 [1] Elytra matt with fine microstructure and with rough rows of punctures; pronotal puncturation fine and homogenous; longitudinal elytral depressions with golden hairs; brightly bronze subsepcies; 9.6—11.0 mm; SE Iran *C. lawsoniae orientalis* sp. n.

***Aurigena lugubris mutabilis* Abeille, 1896**

S. Iran, 1700 m, Dashte-Arjan, 9. 6. 1973, loc. no. 230, 3 ex.; S. Iran, Zagros, Sisakht, 2400 m, 13.—15. 6. 1973, loc. no. 240, 2 ex.; S. Iran, 29 km E. Yasuj. 2300 m, 16.—17. 6. 1973, loc. no. 245, 1 ex.
Distribution: East Turkey, Syria, Iraq, Iran.

***Latipalpis (Palpilatis) persica* Bílý, 1980**

S. Iran, 1700 m, Dashté-Arjan, 9. 6. 1973, loc. no. 230, 2 ex.
Distribution: South Iran.

***Paratassa coraebiformis* (Fairmaire, 1874)**

SW. Iran, Mollasani, 45 km NW. Ah9az, 13.—14. 4. 1977, loc. no. 288, 10 ex., sweeping of *Diplotaxis* hara.
Distribution: Algeria, Tunis, Egypt, Arabia; new record for Iran.

***Scintillartix iranica* (Obenberger, 1951)**

N. Iran, 2400 m, 9 km NE. Ziara, 10.—16. 7. 1977, loc. no. 400, 1 ex.
Distribution: North and Central Iran.

***Buprestis salomoni* Thomson, 1878**

N. Iran, 1700 m, Tehran-Evin, 26. 6.—2. 7. 1973, loc. no. 260, 1 ex.; N. Iran, 1700 m, Tehran-Evin, 27. 6. 1970, loc. no. 31, 1 ex.
Distribution: Asia Minor, Syria, Transcaucasus, Central Asia, Iran.

Buprestis dalmatina Mannerheim, 1837

Turkey, S. Anatolia, Gazipasa, 3. 7. 1973, 10 ex.

Distribution: Dalmatia, Greece, Asia Minor.

Melanophila picta picta (Pallas, 1782)

C. Iran, Rafsanjan, 26.—28. 4. 1973, loc. no. 181, 3 ex.; C. Iran, Rafsanjan, 22. 3. 1973, loc. no. 131, 2 ex.; N. Iran, Hashtgerd, 10. 7. 1977, loc. no. 399, 10 ex.; N. Iran, 2400 m, 8 km NE. Ziara, 10.—16. 7. 1977, loc. no. 400, 40 ex.; NE. Iran, Mashhad, 9. 11. 6. 1977, loc. no. 362, 15 ex.

Distribution: Central Asia, Iraq, Iran, Afghanistan, China.

Melanophila picta decastigma (Fabricius, 1787)

Turkey, Central Anatolia, Balaban, 16. 6. 1970, loc. no. 12, 1 ex.

Distribution: Algeria, Morocco, South and Central Europe, Asia Minor.

Anthaxia (Cratomerus) diadema shelkovnikovi Obenberger, 1940

N. Iran, 2400 m, 8 km NE. Ziara, 10.—16. 7. 1977, loc. no. 400, 1 ex.

Distribution: Transcaucasus, North Iran.

Anthaxia (Haplanthaxia) caudipennis sp. n.,

Tab. VI, Fig. 41

Body bronze long slender and tapering posteriorly with elongated and somewhat open apex of elytra; dorsal side with white, short and rather dense pubescence, ventral side with dense white toment.

Head slightly narrower than anterior pronotal margin, eyes large but not projecting from outline of the head; their inner margins sharply convergent to vertex which is very narrow (0.6 times narrower than diameter of eye); clypeus deeply incurved anteriorly, structure of frons consisting of oval cells with flat central grains; frons flat with rather long white pubescence forming two parallel stripes along the inner margins of eyes; antennae relatively short, sharply enlarged from the 4th segment; puncturation of vertex fine without central grains.

Pronotum slightly vaulted 1.37 times wider than long with shallow depressions at posterior angles; anterior pronotal margin without medial lobe, lateral margins slightly rounded; maximum width of pronotum immediately behind middle, structure of pronotum consisting of small polygonal cells with very small but sharp central grains; these cells are very small and almost indistinct at the middle of anterior pronotal margin; scutellum small triangular slightly vaulted with fine microstructure.

Elytra slightly vaulted, tapering posteriorly 2.43 times longer than wide at the base and 3.33 times longer than pronotum; structure of elytra

dense and rugose in humeral part; posterior part of elytra with fine punctures somewhat prolonged longitudinally; epipleurae wide not reaching the apex; apical part of each elytron deeply serrate, prolonged and slightly bent outwards.

Legs relatively long, mesotibiae slightly and metatibiae very slightly incurved on inner margin before apex; ventral side of body with long white pubescence and with white dense toment covering almost entire ventral side; only posterior margins and posterior angles of sternites without toment; anal sternite widely rounded at apex with somewhat elevated and feebly serrate margin.

Aedeagus (Tab. VIII, Fig. 59) narrowed in medial part with sharp apex; paramerae slightly enlarged and pointed apically.

Female and bionomy unknown.

Length: 7.1 mm; width: 2.1 mm.

Holotype (♂): C. Iran, Ferdows-e Esfandagheh, 21. 5. 1977, loc. no. 340. Coll. Nat. Mus., Prague, cat. no. 26648.

Anthaxia caudipennis sp. n. is somewhat related only to *A. iliensis* Obnb. from which it differs first of all in the following characters:

A. caudipennis sp. n.

Body tapering posteriorly.

Apex of each elytron prolonged and bent outwards.

Elytra without sharp lateral edge.

Structure of pronotum with sharp but small central grains.

Vertex 0.6 times narrower than width of eye.

Frontal pubescence forming two stripes of long white hairs along inner margin of eyes.

Ventral side with dense white toment.

Paramerae slightly enlarged in apical part.

A. iliensis Obnb.

Body subparallel.

Apex of each elytron simply rounded.

Elytra with sharp lateral edge.

Structure of pronotum with large and flat central grains.

Vertex 1.4 times wider than width of eye.

Frontal pubescence short and not condensed in stripes.

Ventral side without toment.

Paramerae not enlarged in apical part.

***Anthaxia (Haplanthaxia) wethloi* Obenberger, 1940**

S. Iran, 29 km E. Yasuj, 2300 m, 16.—17. 6. 1973, loc. no. 245, 2 ex.;

S. Iran, Zagros, Sisakht, 2400 m, 13.—15. 6. 1973, loc. no. 240, 1 ex.;

C. Iran, 2800 m, Dalehzar, 24.—30. 5. 1977, loc. no. 347, 2 ex.

Distribution: Iran.

***Anthaxia (Haplanthaxia) fedtschenkoi* Semenov, 1895**

E. Iran, 1100 m, 33 km D. Sabzvaran, 6.—7. 5. 1973, loc. no. 189, 3 ex.;

E. Iran, 1650 m, Gav Koshi, 7.—8. 5. 1973, loc. no. 190, 3 ex.

Distribution: Central Asia, Afghanistan, new record for Iran.

***Anthaxia (Haplanthaxia) angustipennis* Klug, 1829)**

SE. Iran, 55—78 km NNW. Tis, Pish mant riv., 8. 4. 1973, loc. no. 151, 1 ex.; SE. Iran, Chasemabad, 10 km E. Bampur, 11.—12. 4. 1973, loc. no. 157, 2 ex.; S. Iran, Fariab, 350 m, 17.—18. 5. 1973, loc. no. 201, 1 ex.; S. Iran, Asaloooyeh, 23. 4. 1977, loc. no. 308, 13 ex.; S. Iran, Derpehan, 12 km E. Senderk, 11.—12. 5. 1977, loc. no. 326, 1 ex.; S. Iran, 42 km NE. Bandar Lengeh, 26. 4. 1977, loc. no. 314, 2 ex.; S. Iran, Isin, 11.—15. 4. 1973, loc. no. 198, 1 ex.; S. Iran, Isin, 28. 4.—6. 5. 1977, loc. no. 320, 1 ex.; S. Iran, 40 m, Bilai, 13.—14. 5. 1977, loc. no. 329, 1 ex.; S. Iran, 12 km NW. Kangan, 21.—22. 4. 1977, loc. no. 305, 1 ex.; S. Iran, Hasan Langi, 9.—10. 5. 1977, loc. no. 324, 1 ex.

Distribution: Algeria, Morocco, Egypt, Tschad, Arabia, Iraq, Iran.

***Anthaxia (Haplanthaxia) congregata* Klug, 1829**

SE. Iran, 55—78 km NNW. Tis, Pish mant riv., 8. 4. 1973, loc. no. 151, 1 ex.; S. Iran, Derpehan, 12 km E. Senderk, 11.—12. 5. 1977, loc. no. 326, 5 ex.

Distribution: Algeria, Egypt, Arabia; new record for Iran.

***Anthaxia (Haplanthaxia) armeniaca farsica* ssp. n.**

A. armeniaca farsica ssp. n. differs from the typical subspecies by very long and slender aedeagus (Tab. VII, Fig. 47) and by form of male metatibiae (Tab. VII, Fig. 53) which are distinctly serrate on inner margin and slightly incurved before apex (see key). From *A. armeniaca judinae* Step. it differs by narrower vertex (2.5 times wider than the width of eye), less projecting eyes and also by longer and more slender aedeagus. The differential diagnosis of all subspecies are given in the following key of *A. armeniaca* group (page 62).

Length: 4.0—5.6 mm (holotype 4.9 mm); width: 1.2—1.9 mm (holotype 1.4 mm).

Holotype (♂): S. Iran, 28 km N. Nasiri, 1650 m, 12. 6. 1973, loc. no. 236. Coll. Nat. Mus., Prague, cat. no. 26649.

Allotype (♀): S. Iran, Mian Jangal, 30. 5.—5. 6. 1973, loc. no. 223.

Paratypes: S. Iran, Mian Jangal, 30. 5.—5. 6. 1973, loc. no. 223 (2 ♂♂, 4 ♀♀); S. Iran, 28 km N. Masiri, 1650 m, 12. 6. 1973, loc. no. 236 (1 ♂, 1 ♀); C. Iran, Ferdows-e Esfandageh, 21. 5. 1977, loc. no. 340 (1 ♀); S. Iran, 29 km E. Yasuj, 2300 m, 16.—17. 6. 1973, loc. no. 245 (3 ♀♀); S. Iran, 30 km E. Kazarun, 1300 m, 8.—10. 6. 1973, loc. no. 229 (1 ♂); S. Iran, 15 km NW. Mian Jangal, 5. 6. 1973 loc. no. 224 (2 ♂♂, 2 ♀♀).

***Anthaxia (Haplanthaxia) beludjistana* sp. n.**

(Tab. V, Fig. 35)

Body flattened metallic green with bronze lustre or bronze with green lustre; pronotum lustrous, elytra with silky lustre; whole body

with extremely fine white pubescence; ventral side and frons green (♂) or bronze (♀).

Head very wide, wider (incl. eyes) than anterior pronotal margin; frons flat very wide, inner margins of eyes more (♂) or less (♀) S-shaped; structure of head consisting of indistinct oval cells with large and flat central grains; vertex flat 2.0 (♂) or 2.3 times (♀) wider than diameter of eye; eyes large projecting beyond outline of the head; clypeus with slightly incurved anterior margin; antennae relatively short, serrate from the 4th segment; 3rd segment slightly serrate at male and conical in female; 2nd segment almost spherical somewhat shorter than the 3rd one; pubescence of head short, length of hairs = diameter of frontal cells.

Pronotum flat and wide, 1.6 times wider than long, lustrous; sometimes with very feeble longitudinal medial groove and always with wide and shallow depressions at posterior angles; anterior pronotal margin lobate in middle, posterior margin almost straight; lateral margins regularly arcuate in anterior two thirds and almost straight in posterior third; the widest part of pronotum immediately before middle; structure of pronotum consisting of a network of flat polygonal or oval cells with flattened and indistinct central grains; central grains are somewhat more distinct at lateral pronotal margins; bases of pronotal cells very lustrous without microstructure; scutellum small, flat, subcordiform.

Elytra flat with silky lustre because of their fine microstructure, 1.95 times longer than wide in humeral part and 3.3 times longer than prosternum; elytra narrowed behind humeral swellings, almost parallel in medial part and straightly tapering in posterior third; apical part of elytra very slightly serrate each elytron rounded separately; epipleura not reaching the apex of elytra.

Anal sternite of male rounded, of female indistinctly notched apically; lateroapical part of anal sternite sharply serrate in both sexes; pro-, meso- and metaepimerae with white tomentose spots; inner margins of male meso- and metatibiae slightly incurved apically; this incurved part of metatibiae distinctly serrate.

Aedeagus long and slender (Tab. VIII, Fig. 61) with very feeble lateral serration, paramerae also very slender not enlarged apically.

Sexual dimorphism: male with green frons, incurved serrate metatibiae and rounded anal sternite; female with bronze frons, straight metatibiae and slightly notched anal sternite.

Length: 5.9—7.2 mm (holotype 5.9 mm); width: 1.9—2.4 mm (holotype 2.0 mm).

Holotype (♂): SE. Iran, 40 km NW. Paskúh, 29. 3. 1973, loc. no. 139, reared from *Elaeagnus angustifolia*. Coll. Nat. Mus., Prague, cat. no. 26650.

Allotype (♀): the same data.

Paratypes (3 ♂♂): the same data.

A. beludjstana sp. n. belongs to the *A. armeniaca* group and it is closely related to the central Asian species *A. elaeagni* Richt. and to

Indian species *A. marshalli* Stebb. from which it differs by the characters given in the key of *A. armeniaca* group [page 62].

***Anthaxia (Haplanthaxia) turana chorasana* ssp. n.**

A. turana chorasana ssp. n. differs from *A. turana turana* Obnb. in the following characters: body larger more robust and darker (dark brown with bronze lustre); structure of middle part of pronotum consisting of fine basal microstructure and rather large and sparse flat grains (rudiments of central grains of pronotal cells which are absent on this part of pronotum); pronotum narrower (only 1.75 times wider than long); elytra more tapering posteriorly; aedeagus somewhat longer (Tab. VIII, Fig. 66); aedeagus of *A. tuana turana* Tab. VIII, Fig. 65.

Length: 4.2–5.7 mm (holotype 5.2 mm); width: 1.4–1.9 mm (holotype 1.7 mm).

Holotype (♂): NE. Iran, Hesar, 50 km ESE. Nishabur, 12.—13. 6. 1977, 1400 m, loc. no. 364. Coll. Nat. Mus., Prague, cat. no. 26652.

Allotype (♀): the same data.

Paratypes (6 ♂♂): the same data.

More detailed data about position of *A. turana chorasana* ssp. n. in *A. armeniaca* group are given in the key [page 62].

***Anthaxia (Haplanthaxia) iranica* (Richter, 1949)**

SE. Iran, Bahu Kalat, 3.—4. 4. 1973, loc. no. 147, 39 ex.; SE. Iran, Tis, 6.—7. 4. 1973, loc. no. 150, 1 ex.; SE. Iran, Rask, vall. riv. Sarbáz, 3.—4. 4. 1973, loc. no. 146, 1 ex.; S. Iran, Isin, 11.—15. 4. 1973, loc. no. 198, 21 ex.; S. Iran, 17 km NE. Rudan, road tunnel no. 7, 15. 5. 1977, loc. no. 331, 3 ex.; S. Iran, Isin, 29. 4.—6. 5. 1977, loc. no. 320, 2 ex.; E. Iran, Banue-Charehar 1800—2000 m, 8. 5. 1973, loc. no. 191, 1 ex.; E. Iran, Mohammadabad, 1600 m, 3.—5. 5. 1973, loc. no. 187, reared from *Nerium indicum kotschii* 64 ex.

Distribution: Southern Iran.

***Anthaxia (Haplanthaxia) gedrosiana* sp. n.**

(Tab. V, Fig. 32)

Body short vaulted tapering posteriorly golden green with silky lustre; frons green, ventral side of body bronze with metallic lustre; pubescence of body white distinct and rather dense.

Head very wide, somewhat wider than anterior pronotal margin, frons and vertex flat, eyes large, projecting beyond outline of the head; structure of head consisting of fine microstructure and small indistinct rounded cells without central grains and without sharp margins; clypeus very feebly incurved, almost straight, inner margins of eyes convergent in upper part, vertex 2.7 times wider than width of eye; antennae relatively short and serrate from the 4th segment; frontal pubescence short, erect and very dense.

Pronotum narrow, very vaulted 1.50 times wider than long with well developed medial lobe of anterior margin; laterobasal depressions shallow and indistinct; lateral margins rounded in middle part and distinctly incurved before posterior angles; the maximum width of pronotum immediately behind middle; structure of pronotum consisting of a network of small but very distinct polygonal cells with small and sharp central grains; borders of these cells forming fine longitudinal wrinkles on lateral parts of pronotum; pronotal pubescence somewhat shorter than the frontal one; scutellum small, triangular and slightly vaulted with very fine microstructure.

Elytra 1.95—2.05 times longer than wide at humeral part sharply tapering posteriorly, humeral swellings well developed; epipleurae well developed but not reaching the apex of elytra; posterior lateral serration of elytra fine, each elytron rounded separately; elytral pubescence distinct, rather long and dense, homogenous.

Pubescence of ventral side of the same type as the pubescence of dorsal part of body; indistinct white tomentose spots developed only on the 1st abdominal segment and on pleurae of the last sternite; anal sternite rounded and slightly serrate apically; legs slender, all male metatibiae slightly incurved before apex and slightly serrate on inner margin (Tab. VII, Fig. 57).

Aedeagus (Tab. VIII, Fig. 60) long and very slender with thin paramerae and with praepical serration, which is characteristic for all species of this group.

Female and bionomy unknown.

Length: 5.6 mm (holotype) and 3.9 mm (paratype); width: 2.0 mm (holotype) and 1.6 mm (paratype).

Holotype (♂): SE. Iran, Rask, vall. riv. Sarbaz 3.—4. 4. 1973, loc. no. 146. Coll. Nat. Mus., Prague, cat. no. 26651.

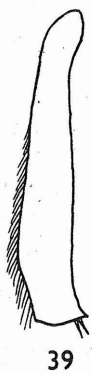
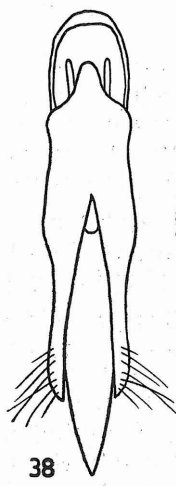
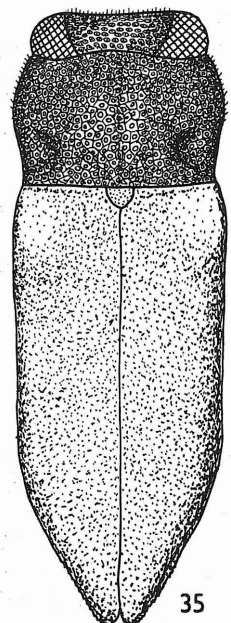
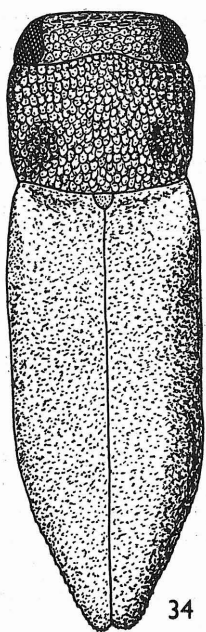
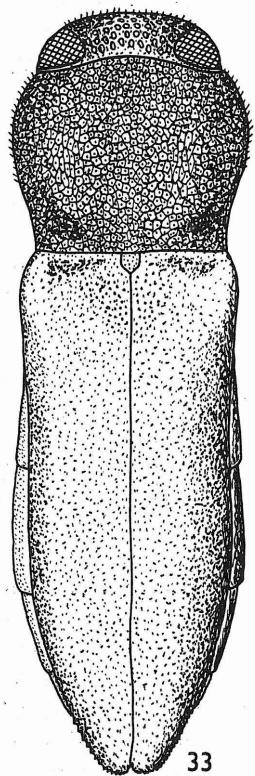
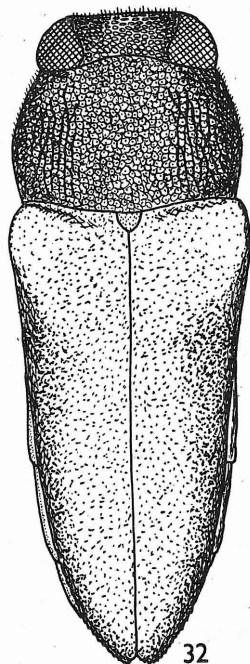
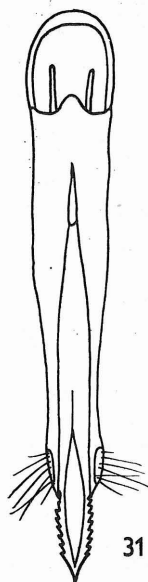
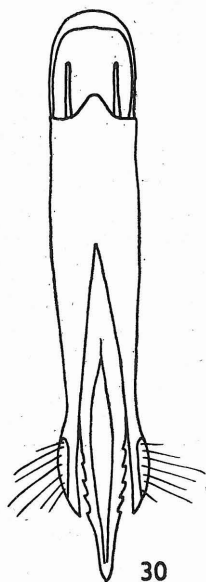
Paratype (♂): SE. Iran, 25 km W. Ghasre-ghand, 9.—10. 4. 1973, loc. no. 153.

A. gedrosiana sp. n. belongs to the *A. armeniaca* group and it is related to *A. iranica* Richt. It differs from this species and from other species of the group first by body shape, very vaulted and narrow pronotum and by several other characters given in the diagnostic key of *A. armeniaca* group.

Key of *Anthaxia armeniaca* Obnb. group

- 1 (6) More slender species; eyes not projecting beyond the outline of the head which is narrower (incl. eyes) than anterior pronotal

Table 5. Fig. 30: *Anthaxia (Haplanthaxia) laticeps* Ab., aedeagus; 31: *A. (Haplanthaxia) farah* sp. n., aedeagus; 32: *A. (Haplanthaxia) gedrosiana* sp. n., holotype, ♂, 5.6 mm; 33: *A. (Haplanthaxia) roxana* sp. n., holotype, ♂, 4.4 mm; 34: *A. (Haplanthaxia) farah* sp. n., holotype, ♂, 3.2 mm; 35: *A. (Haplanthaxia) beloudjistan* sp. n., holotype, ♂, 5.9 mm; 36: *A. (Haplanthaxia) farah* sp. n., male metatibia; 37: *A. (Haplanthaxia) laticeps* Ab., male metatibia; 38: *A. (Haplanthaxia) puella* Bílý, aedeagus; 39: *A. (Haplanthaxia) puella* Bílý, male metatibia.



- margin; vertex narrow 1.4 times wider than width of eye at most; only lateral parts of pronotum with structure consisting of cells with central grains, middle part of pronotum with rugose or grain structure; pronotum with deep and wide laterobasal depressions.
- 2 [3] More slender and lustrous species; vertex 1.2 times wider than diameter of eye; pronotum narrower, only 1.60 times wider than long with shallow transverse depression in middle part, very lustrous without basal microstructure; anal sternite of male with almost smooth lateral margins and with straight widely cut apex; anal sternite of female with deep rounded notch; aedeagus longer, tegmen conspicuously enlarged in middle (Tab. VII, Fig. 51); 4.0—5.5 mm; Central Asia *A. volkovitshi* Bílý.
- 3 [2] More robust and matt species; vertex 1.4 times wider than width of eye; pronotum 1.75—1.90 times wider than long, flattened in middle and matt with fine basal microstructure; anal sternite of male with deeply serrate lateral margins and with almost rounded apical margin; anal sternite of female only with very small notch; aedeagus shorter, tegmen not conspicuously enlarged in middle (Tab. VIII, Figs. 65, 66).
- 4 [5] Smaller and slender subspecies with slight copper lustre; middle part of pronotum with fine rugose structure; pronotum 1.90 times wider than long; elytra less tapering posteriorly; aedeagus (Tab. VIII, Fig. 65); 3.9—5.3 mm; South Turcmenia, Kopet Dag Mts; host plant: *Pistacia vera* *A. turana turana* Obnb.
- 5 [4] Larger and more robust subspecies with dark bronze coloration; middle part of pronotum with structure consisting of small smooth and sparse grains and of fine basal microstructure; pronotum 1.75 times wider than long; elytra more tapering posteriorly; aedeagus Tab. VIII Fig. 66; 4.5—5.9 mm; NE Iran, prov. Chorasán *A. turana chorasana* ssp. n.
- 6 [1] More robust species; eyes projecting beyond outline of the head which is usually somewhat wider than anterior pronotal margin; vertex wide 1.8—2.6 times wider than width of eye; entire pronotum with structure consisting of a distinct network of polygonal or oval cells with or without central grains; laterobasal depressions shallow.
- 7 [10] Lateral parts of pronotum with structure consisting of elongated or longitudinally connected cells borders of which form fine longitudinal wrinkles (Tab. V, Fig. 32).
- 8 [9] Body robust subparallel somewhat flattened and lustrous; vertex 1.8—2.0 times wider than width of eye; pronotum wide 1.7—1.8 times wider than long flattened with distinct medial groove; laterobasal depressions well developed; structure of middle part of pronotum with indistinct central grains; frontal and dorsal pubescence extremely short; male metatibiae enlarged in distal part and sharply incurved before apex (Tab. VII, Fig. 58); anal sternite of male cut at apex, aedeagus shorter and robust (Tab. VIII, Fig. 62); coloration

- very variable: from green to reeddish-bronze; 4.7—8.6 mm; Central, South and South East Iran; host plant: *Nerium indicum kotschii* *A. iranica* (Richt.)
- 9 (8) Body slender vaulted and tapering posteriorly with silky lustre; vertex 2.7 times wider than width of eye; pronotum 1.5 times wider than long very vaulted without medial groove; laterobasal depressions almost indistinct; structure of middle part of pronotum with sharp and well developed central grains; frontal and dorsal pubescence lonegr and distinct; male metatibiae only slightly incurved before apex which is not enlarged (Tab. VII, Fig. 57); anal sternite of male rounded; aedeagus slender and long (Tab. VII, Fig. 57); golden green with silky lustre; 3.9—5.6 mm; South East Iran, Beloudjistan *A. gedrosiana* sp. n.
- 10 (7) Entire pronotum with homogenous polygonal and oval cells, without longitudinal lateral wrinkles.
- 11 (12) Short and robust species; pronotum 1.7 times wider than long; elytra 1.8 times longer than wide; brightly bronze species sometimes with reddish lustre; male metatibiae very slightly serrate on inner margin (Tab. VIII, Fig. 55); aedeagus Tab. VII, Fig. 50; 5.3—7.1 mm; Central Asia; host plants: *Elaeagnus angustifolia* and *Amygdalus* spp. *A. elaeangi* Richt.
- 12 (11) More elongate and less robust species; pronotum 1.3—1.6 times wider than long; elytra 2.0—2.1 times longer than wide; dark bronze or brownish-green species; male metatibiae smooth or distinctly serrate on inner margin.
- 13 (16) Wider and more robust species with flat body; diameter of cells on lateral parts of pronotum 1.5 times larger than that in the middle; central grains developed only at lateral parts of pronotum or undeveloped, middle part always without central grains; scutellum small and rounded.
- 14 (15) Pronotum 1.6 times wider than long; lustrous without basal microstructure; structure at lateral pronotal margins with central grains; lateral pronotal margins enlarged at middle; anterior pronotal margin narrower than the posterior one; elytra not caudiform apically, epipleuras smooth; male metatibiae very slightly serrate (Tab. VII, Fig. 56); head and pronotum golden green, elytra brownish-green and matt with silky lustre and with very fine microstructure; aedeagus very slender (Tab. VIII, Fig. 61); 5.9—7.2 mm; South East Iran; host plant: *Elaeagnus angustifolia* *A. beloudjistan* sp. n.
- 15 (14) Pronotum 1.4 times wider than long, matt with fine basal microstructure; structure of whole pronotum without distinct central grains lateral pronotal margins subparallel, anterior and posterior pronotal margins almost of the same width; elytra slightly caudiform apically; posterior half of epipleuras serrate; male unknown;

- female dark bronze, pronotum with reddish tinge; 6.1 mm; Punjab *A. marshalli* Stebbing
- 16 (13) Slender and more vaulted species; entire pronotum covered with uniform small polygonal cells with small sharp central grains; scutellum larger triangular or subcordiform; male metatibiae more or less serrate on inner margin; body dark bronze lustrous, male with green frons.
- 17 (20) Vertex only 2.0—2.5 times wider than width of eye; body vaulted, eyes projecting less beyond outline of the head.
- 18 (19) Vertex only 2.0 times wider than width of eye; elytra more tapering posteriorly (in the posterior third); male metatibiae very finely serrate, almost smooth (Tab. VII, Fig. 52); aedeagus shorter and more robust (Tab. VII, Fig. 48); 4.5—6.2 mm; Armenia; East Turkey, South East Iraq, South West Iran; host plant: *Pistacia vera* *A. armeniaca* Obnb.
- 19 (18) Vertex 2.5 times wider than width of eye; elytra less tapering posteriorly; male metatibiae distinctly serrate (Tab. VII, Fig. 53); aedeagus longer and slender (Tab. VII, Fig. 47); 4.0—6.5 mm; South Iran (prov. Fars) *A. armeniaca farsica* sp. n.
- 20 (17) Vertex 3.0—3.2 times wider than width of eye; body flat, eyes sharply projecting beyond outline of head; male metatibiae distinctly serrate (Tab. VII, Fig. 54); aedeagus short and robust (Tab. VII, Fig. 49); 5.2—6.2 mm; Central Asia; host plant: *Pistacia vera* *A. armeniaca judinae* Step.

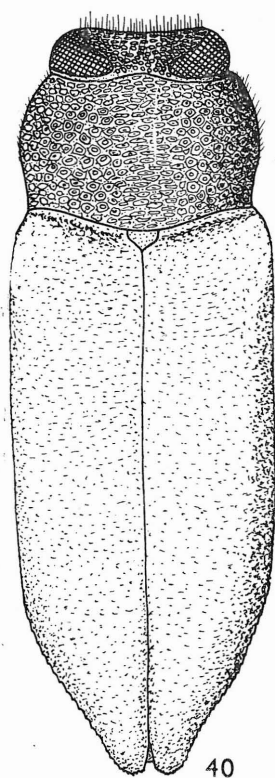
***Anthaxia (Haplanthaxia) farah* sp. n.**

(Tab. V, Fig. 34)

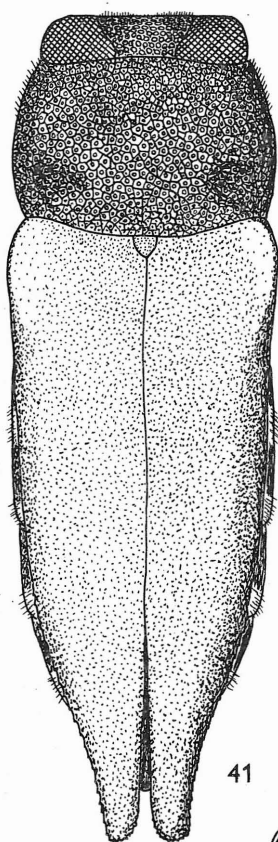
Body small, flattened, subparallel brightly bronze with reddish pronotum; pubescence of dorsal side extremely fine almost indistinct; ventral side with very fine and sparse hairs and sometimes with white tomentose spots on abdominal pleurites and on meso- and metaepimerae.

Head very wide slightly wider than anterior pronotal margin; clypeus with slightly incurved anterior margin, frons flat, vertex very wide: 4.4 times (♂) or 5.0 (♀) wider than width of eye; inner margins of eyes slightly convergent anteriorly and parallel posteriorly; structure of head consisting of a very fine microstructure and of a feeble sparse and smooth granulation which is very indistinct; antennae short and slender slightly serrate from the 4th segment.

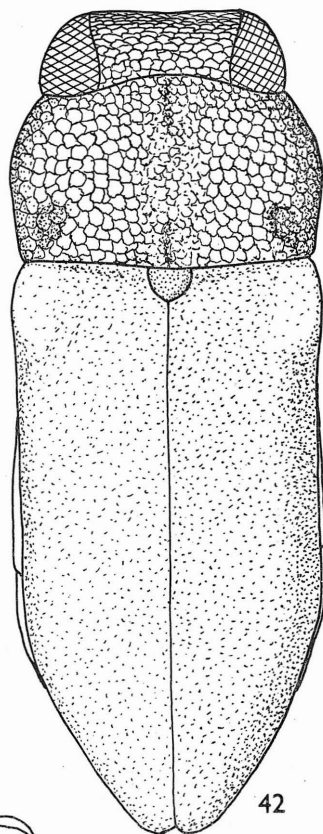
Table 6. Fig. 40: *Anthaxia* [s. str.] *magnifica* sp. n., holotype, ♀, 11.0 mm; 41: *A. (Haplanthaxia) caudipennis* sp. n., holotype, ♂, 7.1 mm; 42: *A. (s. str.) stateira* sp. n., holotype, ♂, 4.2 mm; 43: *A. (s. str.) stateira* sp. n., aedeagus; 44: *A. (s. str.) stateira* sp. n., ovipositor; 45: *A. (Haplanthaxia) roxana* sp. n., aedeagus; 46: *A. (Haplanthaxia) roxana*, ovipositor.



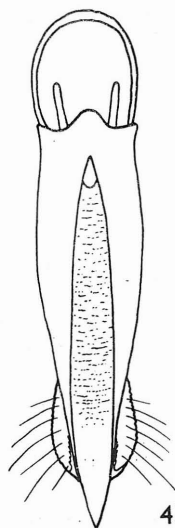
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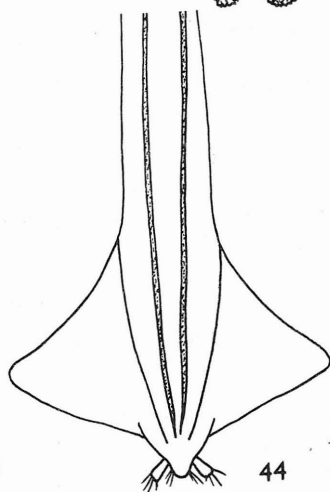
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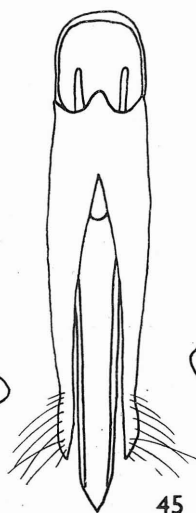
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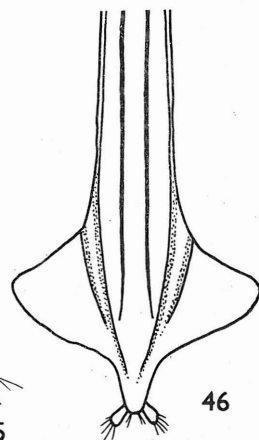
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Pronotum flattened 1.40 times wider than long with very shallow and wide laterobasal depressions; anterior pronotal margin widely lobate, lateral margins almost parallel more narrowed posteriorly than anteriorly; posterior angles obtuse, lateral pronotal margins slightly incurved before posterior angles; structure of entire pronotum consisting of a network of feeble oval cells without central grains and of a fine basal microstructure; scutellum subcordiform flattened with fine microstructure.

Elytra rather flat 2.25 times longer than wide; parallel in anterior two thirds and strongly tapering posteriorly; epipleurae narrow, not reaching the apex; apical part of elytral margins with fine serration, each elytron rounded separately; elytral structure very fine consisting only of very fine microstructure.

Legs very slender and thin, male metatibiae (Tab. V, Fig. 36) with sharp serration on inner margin. Anal sternite with structure consisting of arched wrinkles and with elevated and serrate lateral margins.

Aedeagus (Tab. V, Fig. 31) short and slender with praeapical serration, paramera very slender not enlarged apically.

Sexual dimorphism: male bronze, elytra with feeble green lustre, vertex narrower (see above), metatibiae with serration and incision on inner margin (Tab. V, Fig. 36), anal sternite slightly cut apically; female with reddish lustre (especially on pronotum), vertex wider, metatibiae simple, anal sternite rounded apically.

Length: 3.2—4.2 mm (holotype 3.2 mm); width: 1.0—1.3 (holotype 1.0 mm).

Holotype (♂): S. Iran, 30 km E. Kazerun, 1300 m, 8.—10. 6. 1973, loc. no. 229. Coll. Nat. Mus., Prague, cat. no. 26 653.

Allotype (♀): S. Iran, Zagros, Sisakht, 2400 m, 13.—15. 6. 1973. loc. no. 240.

Paratype (1 ♂): C. Iran, Ferdows-e Esfandagheh, 21. 5. 1977, loc. no. 340.

A. farah sp. n. is related to *A. laticeps* Abeille from Greece. The species differ from each other by the following characters:

A. farah sp. n.

Body more flattened and tapering in posterior part, brightly bronze with somewhat reddish pronotum and head.

Vertex very wide (4.4—5.0 times wider than width of eye).

Frons hairless.

Structure of pronotum completely without central grains.

Pronotum with shallow and wide laterobasal depressions and with obtuse posterior angles.

A. laticeps Ab.

Body vaulted, more cylindrical and brownish-violet with bronze lustre.

Vertex narrower (2.7—3.4 times wider than width of eye).

Frons with very short white pubescence.

Structure of pronotum with small central grains.

Pronotum with smaller but deeper laterobasal depressions and with acute posterior angles.

Lateral pronotal margins slightly incurved before posterior angles.

Male metatibiae sharply serrate and incurved on inner margin (Tab. V, Fig. 36).

Paramerae not enlarged apically; aedeagus with dense praepical serration (Tab. V, Fig. 31).

Lateral pronotal margins deeply incurved before posterior angles.

Male metatibiae simply bent with very feeble serration (Tab. V, Fig. 37).

Paramerae enlarged apically; aedeagus only with several praepical teeth (Tab. V, Fig. 30).

***Anthaxia (Haplanthaxia) roxana* sp.n.**

(Tab. V, Fig. 33)

Body slender vaulted and almost cylindrical, bronze with green metallic lustre and with white extremely fine and sparse dorsal pubescence.

Head vaulted without any depression; clypeus widely incurved, frons with somewhat longer white pubescence in postclypeal region; structure of head consisting of small and simple punctures, puncturation of vertex somewhat more sparse; eyes relatively large, strongly convergent upwards, vertex 1.6—1.9 times wider than width of eye; antennae very short, overlapping anterior pronotal margin by 4 apical segments; the 2nd antennal segment spherical, 3rd segment cylindrical 1.5 times longer than wide; the 1st and 2nd segments metallic green, segments 3—11 black brown with slight metallic lustre; antennae serrate from the 4th segment.

Pronotum very vaulted, 1.2—1.3 times wider than long with slight somewhat transverse laterobasal depressions and sometimes with extremely fine medial groove; anterior margin slightly lobate in middle, lateral margins strongly arcuate anteriorly and slightly arcuate posteriorly, distinctly incurved before posterior angles; the widest part of pronotum in anterior third; structure of pronotum consisting of a network of feeble polygonal cells with indistinct central grains; cells are somewhat prolonged at lateral pronotal margins; scutellum pentagonal, somewhat longer than wide.

Elytra vaulted 2.1—2.2 times longer than wide at humeral part, strongly narrowed behind humeral swellings, almost parallel in middle and sharply tapering in apical part; each elytron separately rounded and slightly serrate apically; structure of elytra consists of fine puncturation which is somewhat denser and more rough in postscutellar part; humeral swellings well developed and lustrous; basal transverse depression rather deep; epipleurae not reaching apex of elytra.

Legs slender, femora and tibiae bronze with green lustre, claws long slender and brown, tarsi brown with green metallic lustre; ventral side of body green-black with metallic lustre and with sparse white pubescence; anal sternite rounded (♂) or slightly incurved (♀) with deep semicircular wrinkles in both sexes.

Aedeagus short and robust (Tab. VI, Fig. 45), paramerae only slight-

ly enlarged in apical part, penis without serration; ovipositor (Tab. VI, Fig. 46) with very elongate medial apical part bearing styli.

Sexual dimorphism: male with green frons, metatibiae with obtuse internal apical tooth, anal sternite rounded; female with bronze frons, simple metatibiae and with slightly incurved anal sternite.

Length: 3.9—4.8 mm (holotype 4.4 mm); width: 1.1—1.3 mm (holotype 1.2 mm).

Holotype: (♂): SE. Iran 25 km W. Ghasre-ghand, 9.—10. 4. 1973, loc. no. 153. Coll. Nat. Mus., Prague, cat. no. 26 654.

Allotype (♀): S. Iran, Isin, 11.—15. 4. 1973, loc. no. 198.

Paratypes: SE. Iran, 55—78 km NNW. Tis, Pish mant riv., 8. 4. 1973, loc. no. 151 (3 ♂♂); SE. Iran, 25 km W. Ghasre-ghand, 9.—10. 4. 1973, loc. no. 153 (1 ♂); S. Iran, Isin, 11.—15. 4. 1973, loc. no. 198 (1 ♂); S. Iran, 3 km N. Rask, 2. 4. 1973, loc. no. 146 (1 ♀). All material collected by beating of *Prosopis spicigera*, *Acacia arabica* and *A. flava*.

A. roxana sp. n. belongs to *A. angustipennis* Klug group and is closely related to Saharian recently described species *A. mirei* Desc. from which it differs in the following characters:

A. mirei Descarpentries

The 2nd antennal segment longer than wide.

Pronotum regularly rounded laterally.

Frons, pronotum and ventral side with white tomentose spots.

Pronotum without depressions.

Anal sternite of male slightly cut apically, anal sternite of female rounded apically.

A. roxana sp. n.

The 2nd antennal segment spherical.

Pronotum more narrowed posteriorly.

Entire body without tomentose spots.

Pronotum with laterobasal depressions.

Anal sternite of male rounded apically, anal sternite of female slightly incurved apically.

***Anthaxia (Haplanthaxia) puella* Bílý, 1980**

S. Iran, Maharlu, 5.—6. 6. 1973, loc. no. 227, 1 ex. (♂).

Distribution: described recently from two females from East Anatolia; new record for Iran.

Description of male: Male of this species differs from female only by greenish lustre of frons and by metatibiae which are slightly bent, flattened and enlarged in posterior part (Tab. V, Fig. 39); aedeagus rather short and robust with narrow distal parts of paramerae (Tab. V, Fig. 38).

***Anthaxia (Haplanthaxia) flavicomis* Abeille, 1900**

S. Iran, 29 km E. Yasuj, 2300 m; 16.—17. 6. 1973, loc. no. 245, 7 ex.; S. Iran, 6 km SSE. Shul, 2190 m, 17.—18. 6. 1973, loc. no. 248, 1 ex.; S. Iran, 27 km E. Yasuj, 2650 m, 16. 6. 1973, loc. no. 244, 7 ex.; S. Iran, Mian Jangal, 30. 5.—5. 6. 1973, loc. no. 223, 2 ex.; Turkey, SE. Anatolia,

Yüksekova, 7. 7. 1973, 1 ex.; Turkey, C. Anatolia, Gürün, 16. 6. 1970, 1 ex.; Some specimens collected by beating of *Amygdalus aleagnifolia*.

Distribution: Transcaucasus; new record for Iran and Turkey.

***Anthaxia (Haplanthaxia) cichorii* (Olivier, 1790)**

N. Iran, 3 km N. Dasht Golestan forest, 18.—19. 6. 1977, 960 m, loc. no. 375, 16 ex.; N. Iran, 15 km SW Chalus, 4. 7. 1977, 490 m, loc. no. 394, 6 ex.; N. Iran, 8 km NE. Ziaren, 2400 m, 10.—16. 7. 1977, loc. no. 400, 1 ex.; SE. Iran Kazerun, 5.—6. 7. 1970, loc. no. 45, 1 ex.

Distribution: Algeria, Morocco, South and Central Europe, Asia Minor, Ukraine, Caucasus, Transcaucasus, Syria, Iraq, Iran.

***Anthaxia (Haplanthaxia) schah* Abeille, 1904**

W. Iran, Luristan, Pol-e Tang, 490 m, 10.—11. 4. 1977 loc. no. 284, 2 ex.; SW. Iran, Ahwaz, 14. 4. 1977, loc. no. 289, 1 ex.

Distribution: Iran.

***Anthaxia (Haplanthaxia) truncata* Abeille, 1900**

N. Iran, 8 km NE. Ziaren, 2400 m, 10.—16. 7. 1977, loc. no. 400, 16 ex.; W. Iran, Marg-e Malek, 30 km E. Kuhrang, 1. 7. 1970, 3200 m, loc. no. 39, 1 ex.; S. Iran, Sisakht, Dena, 2500—3000 m, 13.—14. 6. 1973, loc. no. 241, 1 ex.

Distribution: holotype labelled „Orient“; new record for Iran.

***Anthaxia (Haplanthaxia) stateira* sp. n.**

(Tab. VI, Fig. 42)

Body short, vaulted, subparallel, black with slight bronze lustre in female and brownish-green pronotum and head in male; head and pronotum entirely hairless, elytra with extremely fine and sparse white pubescence.

Head relatively large, frons and vertex vaulted and slightly depressed in anterior part (male); vertex 3.0 (♂) or 3.5 (♀) times wider than width of eye; inner margins of eyes only very slightly convergent to vertex; clypeus feebly incurved on anterior margin, structure of head consisting of very fine rugose microstructure and of an almost indistinct network of small polygonal cells without central grains; antennae very short; serrate from the 3rd segment.

Pronotum very vaulted, 1.5 times wider than long, anterior margin with large lobe in middle; lateral margins rounded in middle part and slightly incurved at posterior angles; posterior angles obtuse; latero-basal pronotal depressions small, shallow, almost indistinct; structure of pronotum consisting of small feeble polygonal cells without central grains and of a fine rugose basal microstructure; the maximum width of pronotum before middle; scutellum relatively large, subcordiform and slightly depressed.

Elytra vaulted, 2.0 times longer than wide, rather lustrous with fine basal microstructure and with very slight irregular transverse wrinkles; epipleurae narrow, not reaching the apex of elytra; apical part of elytral margins smooth without serration, each elytron rounded separately.

Legs short, metatibiae of both sexes somewhat flattened without sexual dimorphism; ventral side of body lustrous with very short and sparse white pubescence; anal sternite with deep transverse depression in apical part, transversely cut in male and slightly incurved in female.

Aedeagus (Tab. VI, Fig. 43) very short and robust without serration; ovipositor long and slender (Tab. VI, Fig. 44).

Sexual dimorphism: male green with brownish-green elytra, frons with slight depression in anterior part, anal sternite cut apically; female black with slight bronze lustre, frons without any depression, anal sternite slightly and widely incurved apically.

Length: 4.2—6.6 mm (holotype 4.2 mm); width: 1.7—2.0 mm (holotype 1.7 mm).

Holotype (♂): S. Iran, 7 km NW. Shul, 2100 m, 17. 6. 1973, loc. no. 247. Coll. Nat. Mus., Prague, cat. no. 26655.

Allotype (♀): S. Iran, Komehr, 2000 m, 17. 6. 1973, loc. no. 246.

Paratype (1 ♂). the same data as allotype.

A. stateira sp. n. is very closely related to *A. lgockii* Obnb. from which it differs in the following characters:

A. stateira sp. n.

Elytra more lustrous with more rough microstructure.

Frons and especially pronotum with a distinct network of polygonal cells.

Pronotal depressions very feeble almost indistinct.

Anal sternite with deep transverse depression.

Sexual dichromism well developed: male green with brownish-green elytra, female black with slight bronze lustre.

A. lgockii Obnb.

Elytra with silky lustre and fine microstructure.

Frons and pronotum only with fine rugose microstructure; remnants of pronotal cells only at posterior angles.

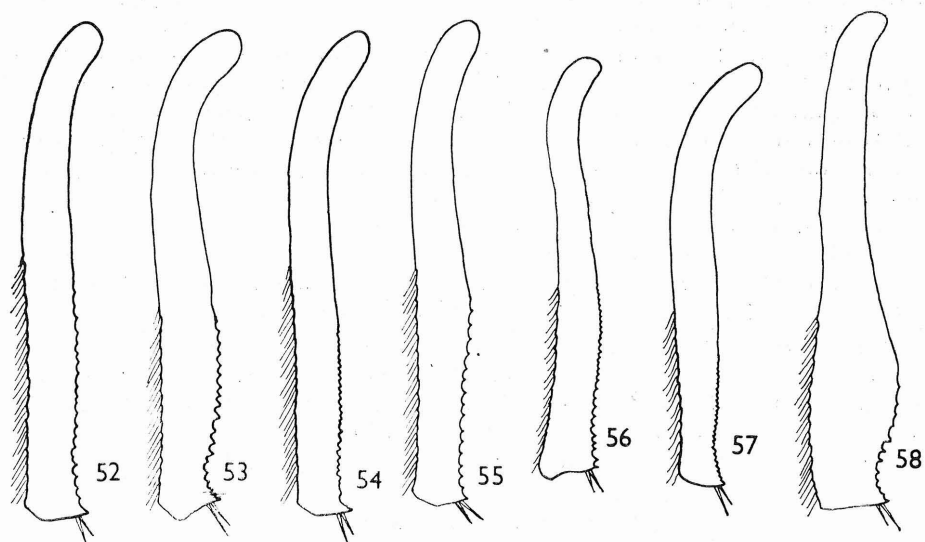
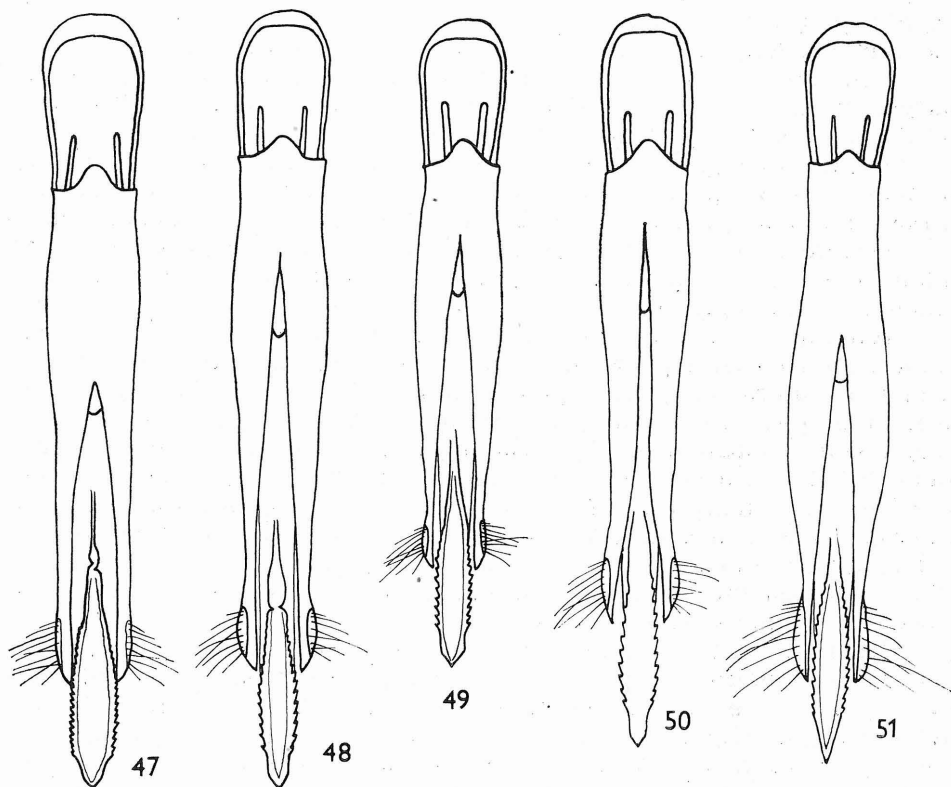
Pronotal depressions deeper and more distinct, especially in male. Anal sternite with only very feeble depression.

Sexual dichromism developed only in coloration of frons (green in male, bronze in female).

***Anthaxia* (s. str.) *magnifica* sp. n.**

Body large wide flat and brightly bicolorous: head, pronotum, scutellum, legs and ventral side golden-green with slight blue lustre, elytra

Table 7. Fig. 47—51: aedeagi; 47: *Anthaxia* (*Haplanthaxia*) *armeniaca jarsica* ssp. n.; 48: *A. (Haplanthaxia) armeniaca armeniaca* Obnb.; 49: *A. (Haplanthaxia) armeniaca judinae* Step.; 50: *A. (Haplanthaxia) elaeagni* Richt.; 51: *A. (Haplanthaxia) volkovitshi* Bílý; 52—58: male metatibiae; 52: *A. (Haplanthaxia) armeniaca armeniaca* Obnb.; 53: *A. (Haplanthaxia) armeniaca jarsica* ssp. n.; 54: *A. (Haplanthaxia) armeniaca judinae* Step.; 55: *A. (Haplanthaxia) elaeagni* Richt.; 56: *A. (Haplanthaxia) beloudjstana* sp. n.; 57: *A. (Haplanthaxia) gedrosiana* sp. n.; 58: *A. (Haplanthaxia) iranica* Richt.



brightly purple with golden lustre; antennae black; pubescence of head and ventrum long white and sparse, pubescence of dorsum short.

Head rather wide, clypeus sharply triangularly incurved on anterior margin, frons flat, vertex narrow — 0.7 times wider than width of eye; eyes large but not protruding beyond outline of the head their inner margins sharply convergent to vertex; structure of whole head consisting of dense and deep rounded punctures with small and sharp central grains; antennae slender reaching the middle of lateral pronotal margins, serrate from the 4th segment, segments 5—10 slightly rhomboid; antennae black except the 1st segment and basal part of the 2nd one which are golden green.

Pronotum slightly vaulted 1.8 times wider than long with wide and shallow laterobasal depressions; anterior pronotal margin slightly lobate in middle, lateral margins regularly arched in anterior two thirds and straight in posterior third; posterior angles obtuse; posterior pronotal margin widely lobate medially; structure of pronotum consisting of dense rounded cells with large central grains; in the middle part of pronotum these cells are changed in fine transverse wrinkles or they are connected transversely and lack their central grains; medial pronotal groove very feeble, almost indistinct; lateral pubescence at anterior angles short, 1.5 times longer than diameter of pronotal cells at most; scutellum small, subcordiform and slightly vaulted.

Elytra flat 2.0 times longer than wide, parallel in anterior two thirds and sharply tapering in posterior third; elytra with sharp lateral edge dividing narrow epipleurae which do not reach the elytral apex; lateral elytral margins slightly serrate and feebly and widely incurved in prae-apical part; each elytron separately rounded; structure of elytra consisting of rough punctures which are here and there connected forming fine wrinkles; elytral pubescence very short, almost indistinct.

Legs long and slender the 1st segment of posterior tarsi of the same length as three following segments together; each abdominal segment (except anal one) with wide and shallow lateral depression; anal segment rounded, slightly serrate with shallow wide apical incision; whole ventral side with sparse and erect white hairs; length of this pubescence is the same as length of frontal one.

Male unknown.

Length: 11.0 mm; width: 3.6 mm.

Holotype (♀): N. Iran, 8 km NE. Ziaran, 2400 m, 10.—16. 7. 1977, loc. no. 400. Coll. Nat. Mus., Prague, cat. no. 26656.

A. magnifica sp. n. belongs to the *A. manca* (F.) group but it differs from all other species of this group by very short pubescence, form of pronotum and elytra which are parallel and slightly incurved in prae-apical part, by laterally depressed abdominal segments, by long first segment of metatarsi and primarily by its unusual, splendid coloration.

***Anthaxia* (s. str.) *bicolor* Faldermann, 1835**

S. Iran, 29 km E. Yasuj, 2300 m, 16.—17. 6. 1973, loc. no. 246, 2 ex.;

N. Iran, C. Elborz, val. Darband Sar 2500—3000 m, 16. 7. 1970, loc. no. 58, 1 ex.

Distribution: Bulgaria, Greece, Asia Minor, Caucasus, Transcaucasus, Iran.

***Anthaxia* [s. str.] *brevis kovari* ssp. n.**

This new subspecies differs from *A. brevis brevis* Cast. et Gory by slightly vaulted frons with very short white hairs (flat frons with long hairs in *A. brevis brevis*) by almost indistinct concentric wrinkles on pronotum, by form of aedeagus (Tab. VIII, Fig. 64) (aedeagus of *A. brevis brevis* Tab. VIII, Fig. 63) and by lustrous elytra with very fine structure (namely in posterior part); *A. brevis brevis* possesses very rugose and grainy elytral structure. Elytra slightly longer (1.70—1.75 times longer than wide at humeral part) than those of *A. brevis brevis* (only 1.5—1.6 times longer than wide).

Length: 4.5 mm; width: 1.9 mm (both specimens).

Holotype (♂): Iran, Pol-e Tang, 60 km NW. Andimeshk, 10.—11. 4. 1977, loc. no. 284. Coll. Nat. Mus., Prague, cat. no. 26657.

SPHENOPTERINAE

***Sphenoptera* [s. str.] *ethiops* Jakovlev, 1891**

S. Iran, Naghshé Rostam, 20.—21. 6. 1973, loc. no. 250, 1 ex.; N. Iran, 21 km SE. Robate Tork, 18. 3. 1973, loc. no. 126, 1 ex.; N. Iran, C. Elburz, Damavand, East, 2500 m, 21. 7. 1970, loc. no. 65, 2 ex.; N. Iran, 8 km NE. Ziara, 2400 m, 10.—16. 7. 1977, loc. no. 400, 1 ex.; N. Iran, Kandavan pass, 2700—2900 m, 4.—9. 7. 1977, loc. no. 395, 1 ex.; C. Iran, 2800 m, Dalehzar, 24.—30. 5. 1977, loc. no. 347, 1 ex.; SW. Iran, Siahmakan Elli, 17.—18. 4. 1977, loc. no. 295, 1 ex.

Distribution: East Turkey, Iraq, Iran.

***Sphenoptera* [s. str.] *glabrata irenae* Obenberger, 1927**

N. Iran, C. Elburz, Damavand, East, 2500 m, 21. 7. 1970, loc. no. 65, 1 ex.; N. Iran, Kandavan pass, 2700—2900 m, S-slope, 4.—9. 7. 1977, loc. no. 395, 7 ex.; N. Iran, Tehran-Evin, Alborz, 1700—2000 m, 9.—10. 3. 1973, loc. no. 123, 4 ex.; N. Iran, C. Elburz, val. Darband Sar, 2500—3000 m, 16. 7. 1970, loc. no. 58, 1 ex.; N. Iran, Tehran-Evin, Alborz, 1700—2000 m, 2.—7. 4. 1977, loc. no. 276, 10 ex.; NE. Iran, 25 km SW. Kalat-e Naderi, 11.—12. 6. 1977, loc. no. 363, 1 ex.; NE. Iran, Assadli, 70 km S. Bojnurd, 1970, m, 17.—18. 6. 1977, loc. no. 374, 4 ex.

Distribution: Iran.

***Sphenoptera* [s. str.] *maledicta* Obenberger, 1919**

S. Iran, Komehr, 2000 m, 17. 6. 1973, loc. no. 246, 1 ex.

Distribution: Iran.

Sphenoptera (s. str.) **morosa** Jakovlev, 1907

N. Iran, Tehran-Evin, Alborz, 9.—10. 3. 1973, loc. no. 123, 1 ex.
Distribution: Central Asia, Iran.

Sphenoptera (s. str.) **mniszechi** Marseul, 1865

W. Iran, Zagros, Marg-e Malek, 3200 m, 1. 7. 1970, loc. no. 39, 1 ex.;
SW. Iran, Hoseiniyeh, 28 km NNW. Andimeshk, 360 m, 12.—13. 4. 1977,
loc. no. 286, 15 ex.
Distribution: East Turkey, Iraq, Iran.

Sphenopter (s. str.) **klickai** Obenberger, 1927

S. Iran, Kamehr, 2000 m, 17. 6. 1973, loc. no. 246, 1 ex.; S. Iran, 27 km
E. Yasuj, 2650 m, 16. 6. 1973, loc. no. 244, 1 ex.; S. Iran, 7 km NW. Shul,
2100 m, 17. 6. 1973, loc. no. 247, 1 ex.
Distribution: South Iran.

Sphenoptera (s. str.) **profusa** Kerremans, 1909

N. Iran, C. Elburz, Damavand, Dajran, 2400 m, 23. 7. 1970, loc. no.
68, 1 ex.
Distribution: North Iran.

Sphenoptera (s. str.) **ajax shahrudensis** Obenberger, 1927

N. Iran, Tehran-Evin, Alborz, 1700—2000 m, 16. 3. 1973, loc. no. 123,
2 ex.
Distribution: North Iran.

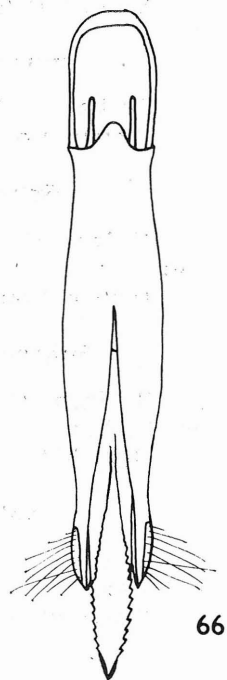
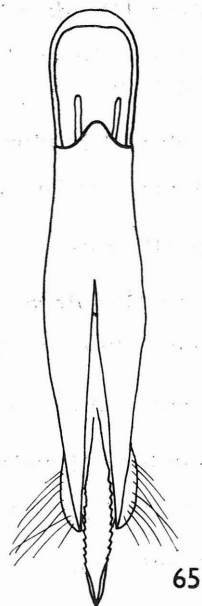
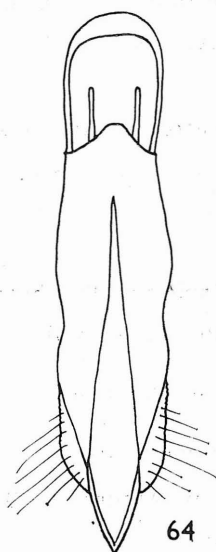
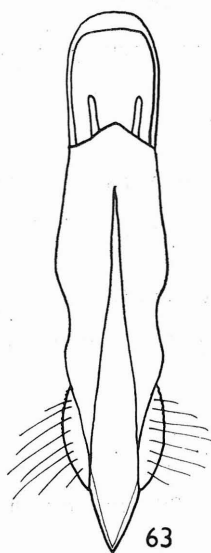
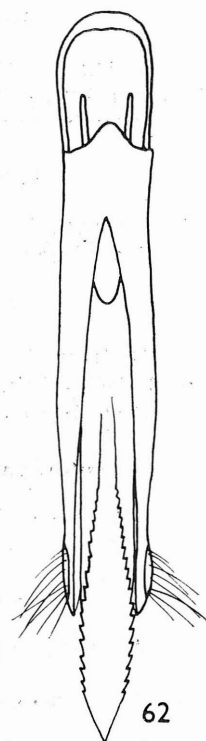
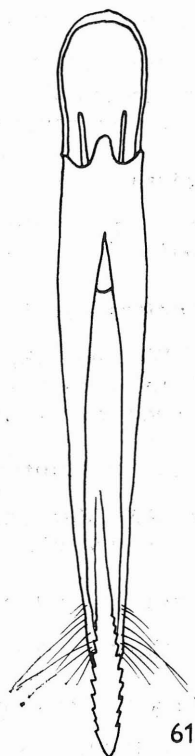
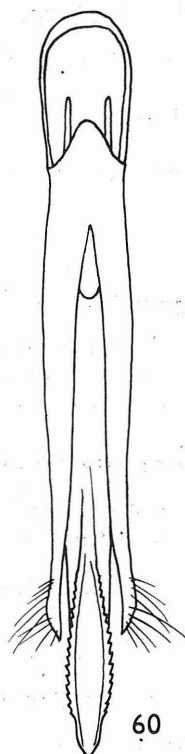
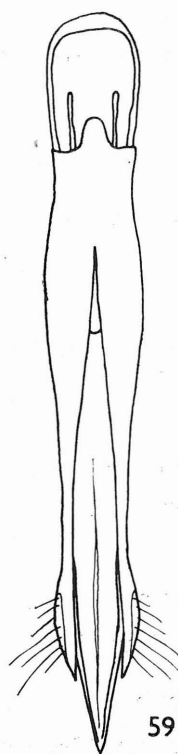
Sphenoptera (s. str.) **oresitropha** Obenberger, 1927

N. Iran, Tehran-Evin, Alborz, 1700—2000 m, 9.—10. 3. 1973, loc. no.
123, 2 ex.; S. Iran, Sisakht, Dena, 2500—3000 m, 13.—14. 6. 1973, loc. no.
241, 1 ex.; N. Iran, Kandavan pas, 2700—2900 m, 4.—9. 7. 1977, loc. no.
395, 1 ex.
Distribution: East Turkey, Syria; new record for Iran.

Sphenoptera (s. str.) **vavrai** Obenberger, 1927

S. Iran, 27 km E. Yasuj, 2650 m, 16. 6. 1973, loc. no. 244, 1 ex..
Distribution: Iran.

Table 8. Fig. 59—66: aedeagi; 59: *Anthaxia* (*Haplanthaxia*) *caudipennis* sp. n.; 60: *A.* (*Haplanthaxia*) *gedrosiana* sp. n.; 61: *A.* (*Haplanthaxia*) *beloudjstana* sp. n.; 62: *A.* (*Haplanthaxia*) *iranica* Richt.; 63: *A.* (s. str.) *brevis brevis* Cast. et Gory; 64: *A.* (s. str.) *brevis kovari* ssp. n.; 65: *A.* (*Haplanthaxia*) *turana turana* Obnb.; 66: *A.* (*Haplanthaxia*) *turana chorasana* ssp. n.



Sphenoptera (s. str.) **hetita** Obenberger, 1927

S. Iran, Sisakht, Dena, 2500—3000 m, 13.—14. 6. 1973, loc. no. 241, 1 ex. on *Astragalus melananthus*.

Distribution: Syria; new record for Iran.

Sphenoptera (s. str.) **rangowi** Kerremans, 1909

N. Iran, E. Elburz, Pass Gaduk, 2200 m, 2. 8. 1970, loc. no. 82, 3 ex.

Distribution: North Iran.

Sphenoptera (s. str.) **eugeni** Jakovlev, 1889

N. Iran, 12 km NW. Hesarak, 5. 3. 1973, loc. no. 122, 2 ex.; N. Iran, 16. 3. 1973, Tehran-Evin, Alborz, 1700—2000 m, loc. no. 123, 4 ex.

Distribution: Transcaucasus; new record for Iran.

Sphenoptera (s. str.) **antiqua ramosula** Obenberger, 1927

NW. Iran, 23 km SW. Marand, 17. 8. 1970, loc. no. 97, 1 ex.

Distribution: Transcaucasus; new record for Iran.

Sphenoptera (s. str.) sp. 1 near **oresitropha** Obnb.

W. Iran, Zagros, Marg-e Malek, 3200 m, 1. 7. 1970, loc. no. 39, 1 ex.

Sphenoptera (s. str.) sp. 2 near **oresitropha** Obnb.

E. Iran, Deh Bakri, 1700—1750 m, 30. 4.—3. 5. 1973, loc. no. 186, 1 ex.

Sphenoptera (Deudora) akbesiana Obenberger, 1919

Turkey, E. Anatolia, Gevas, Van Lake, 28.—29. 7. 1977, 1720 m, 1 ex.

Distribution: East Turkey.

Sphenoptera (Deudora) inculta Obenberger, 1929

N. Iran, C. Eelburz, Damavand, East, 2500 m, 21. 7. 1970, loc. no. 65, 1 ex.

Distribution: North Iran.

Sphenoptera (Deudora) plavilscikovi Obenberger, 1949

W. Iran, Zayandeh Rud, 2200 m, 50 km W. Kuhrang, 1. 7. 1970, loc. no. 38, 2 ex.

Distribution: Central Asia; new record for Iran.

Sphenoptera (Deudora) micans Jakovlev, 1886

N. Iran, 9.—10. 3. 1973, Tehran-Evin, Alborz, 1700—2000 m, loc. no. 123, 2 ex.

Distribution: North Iran.

Sphenoptera (Deudora) ambigua Klug, 1829

N. Iran, C. Eelburz, Damavand, Lajran, 2400 m, 23. 7. 1970, loc. no. 68, 1 ex.; N. Iran, 8 km NE. Ziaran, 2400 m, 10.—16. 7. 1977, loc. no. 400, 1 ex.

Distribution: Syria, Iraq, Iran.

Sphenoptera (Deudora) parysatis Obenberger, 1929

S. Iran, Zagros, Sisakht, 2400 m, 13.—15. 6. 1973, loc. no. 240, 1 ex.
Distribution: South Iran.

Sphenoptera (Deudora) arsinoe Obenberger, 1949

NW. Iran, 26 km SSE. Khoy, 6. 7. 1973, loc. no. 267, 1 ex.; N. Iran, 12 km NW. Hesarak, 5. 3. 1973, loc. no. 122, 2 ex.; N. Iran, Tehran-Evin, Alborz, 1700—2000 m, 16. 3. 1973, loc. no. 123, 1 ex.

Distribution: Iran.

Sphenoptera (Deudora) ahriman Obenberger, 1929

S. Iran, Maharlu, 5.—6. 6. 1973, loc. no. 227, 1 ex.; S. Iran, 7 km NW. Kuhenjan, 5. 6. 1973, loc. no. 226, 1 ex.

Distribution: Iran.

Sphenoptera (Deudora) cassia Obenberger, 1929

N. Iran, 16. 3. 1973, Tehran-Evin, Alborz, 1700—2000 m, loc. no. 123, 1 ex.

Distribution: Iran.

Sphenoptera (Chilostetha) chusistanica Obenberger, 1926

S. Iran, 7 km NW. Shul, 2100 m, 17. 6. 1973, loc. no. 247, 1 ex.
Distribution: South Iran.

Sphenoptera (Chilostetha) verecunda Obenberger, 1949

NW. Iran, 26 km SSE. Khoy, 6. 7. 1973, loc. no. 267, 1 ex.

Distribution: China, Mongolia; new record for Iran.

Sphenoptera (Chilostetha) parumpunctata Klug, 1829

S. Iran, Borazjan, 19. 4. 1977, loc. no. 299, 1 ex.

Distribution: Arabia; new record for Iran.

Sphenoptera (Chilostetha) palea Obenberger, 1949

N. Iran, 8 km NE. Ziaran, 2400 m, 10.—16. 7. 1977, loc. no. 400, 1 ex.

Distribution: Ukraine, Transcaspia; new record for Iran.

Sphenoptera (Chilostetha) elpha Obenberger, 1926

NE. Iran, Kuh-e Binalud, 20 km NE. Nishabur, 13.—15. 6. 1977, 2500 m, loc. no. 366, 1 ex.

Distribution: East Turkey; new record for Iran.

Sphenoptera (Chilostetha) sp. 1 near elisa Jak.

SE. Iran, 13 km SSE. Nikshahr (riv.), 8.—9. 4. 1973, loc. no. 152, 1 ex.

Sphenoptera (Chilostetha) sp. 2 near elisa Jak.

S. Iran, Mian Jangal, 30. 5.—5. 6. 1973, loc. no. 223, 1 ex.

Sphenoptera (Chilostetha) sp. 3 near seriatosetosa Obnb.

S. Iran, 12 km NW. Kangan, 21.—22. 4. 1977, loc. no. 305, 1 ex.

Sphenoptera (Chilostetha) sp. 4 near sikha Obnb.

S. Iran, Asalooeyeh, 23. 4. 1977, loc. no. 308, 1 ex.

Sphenoptera (Chilostetha) sp. 5 near apta Jak.

S. Iran, 20 km NW. Borazjan, 18. 4. 1977, loc. no. 297, 1 ex.; S. Iran, Baghu, 25. 5. 1973, loc. no. 212, 1 ex.

Sphenoptera (Tropeopeltis) simulatrix Reitter, 1895

S. Iran, 30 km E. Kazerun, 1300 m, 8.—10. 6. 1973, loc. no. 229, 1 ex.; C. Iran, 12 km NW. Dawlatabad, 2000 m, 21. 5. 1977, loc. no. 341, 2 ex.

Distribution: Turkey, Iraq; new record for Iran.

Sphenoptera (Tropeopeltis) fulgens Gory, 1842

S. Iran, Derpehan, 12 km E. Senderk, 11.—12. 5. 1977, loc. no. 326, 1 ex.

Distribution: Egypt, Sudan, Ethiopia, Somalia, Arabia; new record for Iran.

Sphenoptera (Tropeopeltis) anthaxoides Reitter, 1895

N. Iran, Tehran-Evin, 1700 m, 26. 6.—2. 7. 1973, loc. no. 260, 1 ex.; S. Iran, Mian Jangal, 30. 5.—5. 6. 1973, loc. no. 223, 4 ex.; S. Iran, 13 km SSW. Yasuj, 1800 m, 12.—13. 6. 1973, loc. no. 239, 1 ex.; C. Iran, Pasht-e Kuh, 1700 m, 21.—22. 5. 1977, loc. no. 343, 1 ex.; E. Iran, 33 km W. Sabzvaran, 6.—7. 5. 1973, 1100 m, loc. no. 189, 1 ex.

Distribution: Transcaucasus, East Turkey, Iraq, Iran.

Sphenoptera (Tropeopeltis) kaznakovi Jakovlev, 1899

S. Iran, Derpehan, 12 km E. Senderk, 11.—12. 5. 1977, loc. no. 326, 1 ex.

Distribution: Central Asia; new record for Iran.

Sphenoptera (Hoplistura) perroteti Guérin, 1841

S. Iran, Isin, 26. 5. 1973, loc. no. 213, 1 ex.; S. Iran, 20 km NW. Borazjan, 18. 4. 1977 loc. no. 297, 1 ex.; S. Iran, 12 km NW. Minab, 18.—19. 5. 1973, 1 ex.

Distribution: India; new record for Iran.

Sphenoptera (Hoplistura) morawitzi Semenov, 1896

S. Iran, Borazjan, 19. 4. 1977, loc. no. 299, 1 ex.

Distribution: Central Asia; new record for Iran.

Sphenoptera (Hoplistura) mesopotamica Marseul, 1865

E. Iran, 30 km SW. Nosratabad, 23. 4. 1973, loc. no. 175, 1 ex.

Distribution: East Turkey, Iraq, Iran.

Sphenoptera (Hoplistura) motschulski Obenberger, 1926

SE. Iran, 55—79 km NNW. Tis, Pish mant riv., 8. 4. 1973, loc. no. 151, 1 ex.; SE. Iran, Tis, 6.—7. 4. 1973, loc. no. 150, 4 ex.; S. Iran, Maloo, 25. 4. 1977, 14 km W. Bandar Lengeh, loc. no. 312, 1 ex.

Distribution: India; new record for Iran.

Sphenoptera (Chrysoblema) reitteri Jakovlev, 1891

SE. Iran, Rask, val. riv. Sarbáz, 3.—4. 4. 1973, loc. no. 146, 1 ex.; E. Iran, Kahurak, 25.—26. 3. 1973, loc. no. 135, 1 ex.; S. Iran, Senderk, 220 m, 12.—13. 5. 1977, loc. no. 327, 3 ex.

Distribution: Transcaucasus; new record for Iran.

Sphenoptera (Chrysoblema) asiatica Castelnau et Gory, 1839

SW. Iran, Darbahare, 10 km NW. Zeidun, 17. 4. 1977, loc. no. 294, 20 ex. on *Tamarix* sp.

Distribution: Iraq; new record for Iran.

Sphenoptera (Chrysoblema) artemisiae Reitter, 1889

N. Iran, Abyek, 24. 4. 1970, loc. no. 30, 1 ex.

Distribution: Transcaucasus, Iran,

Sphenoptera (Chrysoblema) sancta Reitter, 1890

NW. Iran, Qazvin, 24. 6. 1970, loc. no. 29, 1 ex.; NW. Iran, Jabal Kandi, 6. 7. 1973, loc. no. 270, 2 ex.; E. Iran, 25 km NNW. Shusf, 6. 6. 1977, loc. no. 359, 1 ex.; NW. Iran, 10 km NW. Ziarn, 4.—5. 7. 1973, loc. no. 264, 1 ex.; Turkey, E. Anatolia, Gevas, Lake Van, 28.—29. 7. 1977, 1 ex.

Distribution: Transcaucasus: new record for Iran and Turkey.

Sphenoptera (Chrysoblema) cylindricollis Marseul, 1865

S. Iran, Asalooeyeh, 23. 4. 1977, loc. no. 308, 2 ex.

Distribution: Algeria, Egypt, Arabia; new record for Iran.

Sphenoptera (Chrysoblema) beckeri Dohrn, 1866

N. Iran, Kushk-e Nosrat, 28. 6. 1970, loc. no. 33, 2 ex.; NW. Iran, 10 km NW. Ziaran, 4.—5. 7. 1973, loc. no. 264, 1 ex.; NW. Iran, Qazvin, 24. 6. 1970, loc. no. 29, 1 ex.; S. Iran, Baghu, 25. 5. 1973, loc. no. 212, 1 ex.; N. Iran, Robate Tork, 24.—25. 6. 1973, loc. no. 258, 1 ex.

Distribution: Transcaucasus, Central Asia, Iran.

Sphenoptera (Chrysoblema) sovitzii Faldermann, 1835

NW. Iran, Qazvin, 24. 6. 1970, loc. no. 29, 1 ex.; S. Iran, Borazjan, 19. 4. 1977, loc. no. 299, 1 ex.; NW. Iran, Maku, 19.—20. 6. 1970, loc. no. 25, 1 ex.; N. Iran, Robat-e Tork, 29. 6. 1970, loc. no. 34, 1 ex.; S. Iran, Jelání, 41 km NE. Bandar Abbas, 16. 5. 1973, loc. no. 199 b, 2 ex.; N. Iran, Kushk-e Nosrat, 28. 6. 1970, loc. no. 33, 1 ex.; SW. Iran, Darbahare, 10 km NW. Zeidun, 17. 4. 1977, loc. no. 294, 1 ex.; S. Iran, Isin, 11.—15. 4. 1973, loc. no. 198, 1 ex.; S. Iran, Baghu, 25. 5. 1973, loc. no. 212, 1 ex.; C. Iran, Ferdows-e Esfandageh, 21. 5. 1977, loc. no. 340, 2 ex.; SW. Iran, Albaji, 25 km N. Ahvaz, 14. 15. 4. 1977, loc. no. 290, 1 ex.; NE. Iran, 20 km E. Sabzavar, 15.6.1977, loc. no. 367, 2 ex.; E. Iran, Gav Koshi, 1650 m, 7.—8. 5. 1973, loc. no. 190, 1 ex.; S. Iran, Faribad, 350 m, 17.—18. 5. 1973, loc. no. 201, 2 ex.

Distribution: Transcaucasus, Central Asia, Iran.

Sphenoptera (Chrysoblema) sterbai Obenberger, 1927

NW. Iran, Qazvin, 24. 6. 1970, loc. no. 29, 3 ex.; S. Iran, 43 km N. Kahnuj, 540 m, 16.—17. 5. 1977, loc. no. 335, 2 ex.; C. Iran, 12 km NW. Dowlatabad, 2000 m, 21. 5. 1977, loc. no. 341, 1 ex.

Distribution: Iran.

Sphenoptera (Chrysoblema) quetzeli Descarpentries et Mateau, 1963

S. Iran, Baghu, 16. 5. 1973, loc. no. 199 a, 2 ex.; S. Iran, Isin, 26. 5. 1973 loc. no. 213, 1 ex.; S. Iran, Jelání, 41 km NE. Bandar Abbas, 16. 5. 1973, loc. no. 199 b, 3 ex.; S. Iran, Baghu, 25. 5. 1973, loc. no. 212, 8 ex.; most specimens collected by beating *Tamarix marschiana*.

Distribution: Sahara (Tibesti); new record for Iran.

Sphenoptera (Chrysoblema) formosula Obenberger, 1927

N. Iran, Kushk-e Nosrat, 28. 6. 1970, loc. no. 33, 17 ex.

Distribution: Iran.

Sphenoptera (Chrysoblema) viridiaurea Kraatz, 1882

S. Iran, 33 km S. Sabzevaran, 17. 5. 1977, loc. no. 335, 1 ex.; N. Iran, Kushk-e Nosrat, 28. 6. 1970, loc. no. 33, 1 ex.; S. Iran, Borazjan, 19. 4. 1977, loc. no. 299, 1 ex.; SW. Iran, Albaji, 25 km N. Ahwaz, 14.—15. 4. 1977, loc. no. 290, 1 ex.; S. Iran, Jashak, 60 km SE. Kormuj, 20.—21. 4. 1977, loc. no. 304, 1 ex.; SW. Iran, 30 km E. Kazerun, 1300 m, 8.—10. 6. 1973, loc. no. 229, 1 ex.

Distribution: Central Asia; new record for Iran.

CHRYSOBOTHRINAE

Chrysobothris (s. str.) **obenbergeriana** Lotte, 1938

Turkey, S. Anatolia, Gazipaşa, 13. 7. 1973, 3 ex.

Distribution: East Turkey.

Chrysobothris (s. str.) **parvipunctata** Obenberger, 1914

S. Iran, Zagros, Sisakht, 2400 m, 13.—15. 6. 1973, loc. no. 240, 1 ex.;

Distribution: Arabia; new record for Iran.

Chrysobothris (s. str.) **beesoni beesoni** Obenberger, 1926

S. Iran, 12 km NW. Minab, 18.—19. 5. 1973, loc. no. 202, 1 ex.

Distribution: India: new record for Iran.

AGRILINAE

Agrilus viridis (Linné, 1758)

N. Iran, Sheykh Mahalieh, 160 m, 28. 6.—3. 7. 1977, loc. no. 390, 1 ex.

Distribution: Europe, Mediterranean, Asia Minor, Caucasus, Transcaucasus, Iran.

Agrilus lituratus Klug, 1829

SE. Iran, 55—78 km NNW. Tis, Pish mant riv., 8. 4. 1973, loc. no. 151, 1 ex.; S. Iran, Derpehan, 12 km E. Senderk, 11.—12. 5. 1977, loc. no. 326, 3 ex.; SE. Iran, Rask, vall. riv. Sarbaz, 3.—4. 4. 1973, loc. no. 146, 1 ex.; SE. Iran, 25 km W. Ghasre-gand, 9.—10. 4. 1973, loc. no. 153, 1 ex.; S. Iran, Kangan, 22. 4. 1977, loc. no. 306, 2 ex.; all specimens collected by beating *Acacia flava* in blossom.

Distribution: Sicilia, Algeria, Egypt, Sudan, Arabia; new record for Iran.

Agrilus hastulifer aladaghensis Obenberger, 1918

N. Iran, Behshahr, 25. 7. 1970, loc. no. 72, 1 ex.

Distribution: Iran.

Agrilus roscidus sieversi Abeille, 1897

S. Iran, 29 km E. Yasuj, 2300 m, 16.—17. 6. 1973, loc. no. 245, 4 ex.; SW. Iran, Zagros, Sisakht, 2400 m, 13.—15. 6. 1973, loc. no. 240, 8 ex.;

S. Iran, Mian Jangal, 30. 5.—5. 6. 1973, loc. no. 223, 1 ex.; S. Iran, 13 km SSW. Yasuj, 1800 m, 12.—13. 6. 1973, loc. no. 239, 1 ex.; S. Iran, Komehr, 2000, 17. 6. 1973, loc. no. 246, 1 ex. on *Pistacia atlantica*.

Distribution: Caucasus, Transcaucasus, Iran.

***Agrilus hermineus* Abeille, 1907**

NE. Iran, Hesar, 50 km ESE. Nishabur, 1400 m, 12.—13. 6. 1977, loc. no. 364, 16 ex.; NE. Iran, Kalat, 17. 6. 1977, loc. no. 373, 1 ex.

Distribution: Transcaucasus; new record for Iran.

***Agrilus hyperici* (Creutzer, 1789)**

N. Iran, Wldlf. Park, Vicinity of Dasht, 650 m, 27.—30. 7. 1970, loc. no. 77, 1 ex.

Distribution: Algeria, central and South Europe, Asia Minor; new record for Iran.

***Agrilus validiusculus* Semenov, 1891**

E. Iran, Kahurak, 25.—26. 3. 1973, loc. no. 135, 1 ex.

Distribution: Central Asia; new record for Iran.

***Agrilus lopatini* Alexeev, 1968**

S. Iran, 29 km E. Yasuj, 2300 m, 16.—17. 6. 1973 loc. no. 245, 2 ex.

Distribution: Central Asia; new record for Iran.

***Agrilus purpuratus* Klug. 1829**

S. Iran, Derpehan, 12 km E. Senderk, 11.—12. 5. 1977, loc. no. 326, 4 ex. reared from *Acacia flava*.

Distribution: Egypt, Arabia, Algeria; new record for Iran.

***Agrilus sericans* Kiesenwetter, 1857**

Turkey, C. Anatolia, Gürün, 16. 6. 1970, loc. no. 10, 1 ex.; Turkey, E. Anatolia, Gevas, Lake Van, 1720 m, 28.—29. 7. 1977, 5 ex.

Distribution: South Europe, Asia Minor, Ukraine, Transcaucasus, Iran, Iraq, Central Asia, Mongolia.

***Agrilus desertus* Klug, 1829**

S. Iran, Derpehan, 12 km E. Senderk, 11.—12.5. 1977, loc. no. 326, 2 ex. ex *Acacia flava*.

Distribution: Arabia; new record for Iran.

***Clema deserti* Semenov, 1900**

E. Iran, 36 km N. Gonabad, 830 m, 7.—8. 6. 1977, loc. no. 361, 3 ex.

Distribution: Central Asia; new record for Iran.

Coroebus rubi (Linné, 1767)

N. Iran, Lahijan, 3. 7. 1977, loc. no. 392, 5 ex.

Distribution: Morocco, South and Central Europe, Asia Minor, Iran, Caucasus, Transcaucasus.

Meliboeus (Meliboeoides) amethystinus amethystinus (Olivier, 1790)

Turkey, C. Anatolia, Balaban, 16. 6. 1970, loc. no. 12, 1 ex.; Turkey, E. Anatolia, Gevas, 8. 7. 1973, 1 ex.

Distribution: Algeria, Morocco, South Europe, Asia Minor, Ukraine.

Meliboeus (Meliboeoides) amethystinus violaceus Kiesenwetter, 1857

N. Iran, 8 km NE. Ziaran, 2400 m, 10.—16. 7. 1977, loc. no. 400, 1 ex.

Distribution: Transcaucasus, Central Asia, Iran.

Meliboeus (Meliboeoides) parvulus Küster, 1852

S. Iran, Zagros, Sisakht, 2400 m, 13.—15. 6. 1973, loc. no. 240, 1 ex.

Distribution: South Balcanes, Asia Minor, Ukraine, Caucasus; new record for Iran.

Meliboeus (Meliboeoides) robustus Küster, 1852

Turkey, E. Anatolia, Gevas, 8. 7. 1973, 5 ex.; N. Iran, C. Elbruz, Dama-vand, Lajran, 2400 m, 23. 7. 1970, loc. no. 68, 1 ex.

Distribution: Asia Minor, Caucasus, Iraq, Iran.

Meliboeus (Meliboeoides) cyaneus Ballion, 1870

N. Iran, Kandavan pass, 2700—2900 m, 4.—9. 7. 1977, loc. no. 395, 1 ex.; S. Iran, 13 km SSW. Yasuj, 1800 m, 12.—13. 6. 1973, loc. no. 239, 1 ex.; S. Iran, Sisakht Dena, 2500—300 m, 13.—14. 6. 1973, loc. no. 241, 2 ex.

Distribution: Central Asia; new record for Iran.

Meliboeus (Melixes) reitteri Semenov, 1889

C. Iran, Gowk, 31. 5. 1977, loc. no. 352, 1 ex.

Distribution: Transcaucasus, Central Asia, Iran.

Agrilomorpha rotschildi tassi Cobos, 1962

SE. Iran, 55—78 km NNW. Tis, Pish mant riv., 8. 4. 1973, loc. no. 151, 1 ex. reared from *Acacia flava*.

Distribution: Somalia, Arabia; new record for Iran.

Aphanisticus emarginatus (Olivier, 1790)

S. Iran, 8 km NW. Malavi, 880 m, 9.—10. 4. 1977, loc. no. 283, 28 ex. all material collected by sweeping *Juncus* sp.

Distribution: Mediterranean, Central Europe, Asia Minor, Caucasus, Transcaspi; new record for Iran.

CYLINDROMORPHINAE

Paracylindromorphus transversicollis (Reitter, 1913)

E. Iran, Kahúrak, 25.—26. 3. 1973, loc. no. 135, 4 ex.; E. Iran, Kahúrak, 23.—24. 4. 1973, loc. no. 176, 1 ex.; E. Iran, 30 km SW. Nosratabad, 26. 3. 1973, loc. no. 136, 2 ex.; all specimens collected by sweeping *Phragmites australis*.

Distribution: Transcaucasus, Central Asia; new record for Iran.

TRACHYINAE

Trachys koenigi Reitter, 1890

S. Iran, 42 km N. Masírí, 2230 m, 12. 6. 1973, loc. no. 238, 1 ex.

Distribution: Caucasus; new record for Iran.

Trachys ebeniptera Obenberger, 1916

SW. Iran, 48 km N. Masírí, 12. 6. 1973, loc. no. 238, 1 ex.

Distribution: Syria; new record for Iran.

Trachys puncticollis puncticollis Abeille, 1900

NW. Iran, 26 km SSE. Khoy, 6. 7. 1973, loc. no. 267, 2 ex.

Distribution: Caucasus, Transcaucasus; new record for Iran.

Trachys troglodytes Gyllenhal, 1817

NW. Iran, 26 km SSE. Khoy, 6. 7. 1973, loc. no. 267, 1 ex.

Distribution: South and Central Europe, Scandinavia, Ukraine, Caucasus, Asia Minor; new record for Iran.

Trachys iranica Obenberger, 1937

S. Iran, 7 km NW. Shul, 2100 m, 17. 6. 1973, loc. no. 247, 1 ex.; S. Iran, Komehr, 2000 m, 17. 6. 1973, loc. no. 246, 5 ex.; NE. Iran, Kuh-e Binalud, S. slope, 15 km NE. Nishabur, 13.—15. 6. 1977, loc. no. 365, 8 ex.; S. Iran, 29 km SE. Yasuj, 16. 6. 1973, loc. no. 245, 2 ex.

Distribution: Iran.

Trachys sp. near **puncticollis** Abeille

N. Iran, 8 km NE. Ziaran, 2400 m, 10.—16. 7. 1977, loc. no. 400, 2 ex.

Habroloma (s. str.) **aurea** Semenov, 1889

NW. Iran, 21 km E. Maraud, 18. 8. 1970, loc. no. 98, 1 ex.

Distribution: Central Asia, Transcaucasus; new record for Iran.

Discussion

The territory of Iran is very interesting from the zoogeographical point of view since it is the cross-point of many zoogeographical elements. From this view-point the most interesting phenomena there are the penetration of Saharian elements to southern provinces of Iran and on the contrary the penetration of Indian elements to southern-east part of the country. Both these elements are in contact in Beloudjistan where we find an extraordinary mixture of the Palaearctic, Saharian and Indian faunistic elements.

It is possible to divide the studied material into several categories. First there are species which are known only from Iran so far (68 species incl. 23 new ones). The Central Asian elements are the second largest group (22 species). The Saharian (or Sahelian) elements are represented by 15 species and Indian elements by 3 species. Further characteristic group are formed by Cirkummediterranean (8 species), East mediterranean (25 species) and Caspian arboreal elements (20 species). The Eurosibirian elements are represented by 1 species and the Mongolian elements also by 1 species. The material contained also one typical European species.

The review of species belonging to these faunistic elements are given in the following text:

1. Iranian species:

Aaata finchi, *Julodis escalarae*, *J. faldermanni eoa*, *J. consobrina gotwendensis*, *J. laevicostata*, *J. klapaleki*, *J. euphratica beloudjistana*, *Julodella impluviata*, *J. iranica* sp. n., *J. parvula* sp. n., *J. impressithorax* sp. n., *Acmaeodera bushirensis*, *A. wethloi*, *A. hoberlandti* sp. n., *A. sp.* near *truquii*, *A. mazandaranica* sp. n., *Xantheremia volkovitshi* sp. n., *X. jelineki* sp. n., *Acmaeoderella dlabolai* sp. n., *A. nannorrhopsicola*, *A. xerxes*, *A. jezeki* sp. n., *A. safavi*, *Chalcophorella bagdadensis freyi*, *Chlorophorella gerlingi*, *Capnodis hauseri*, *Cyphosoma lawsoniae orientalis* ssp. n., *Latipalpis persica*, *Sphenoptera glabrata irenae*, *S. maledicta*, *S. klickai*, *S. profusa*, *S. ajax shahrudensis*, *S. vavrai*, *S. rangowi*, *S. sp.* 1 near *oresitrophia*, *S. sp.* 2 near *oresitrophia*, *S. inculta*, *S. micans*, *S. parysatis*, *S. arsinoe*, *S. ahriman*, *S. cassia*, *S. chusistanica*, *S. sp.* 1 near *elisa*, *S. sp.* near *seriatosetosa*, *S. sp.* near *sikha*, *S. sp.* near *apta*, *S. sterbai*, *S. formosula*, *Scintillatrix iranica*, *Anthaxia caudipennis* sp. n., *A. wethloi*, *A. armeniaca farsica* ssp. n., *A. beloudjistana* sp. n., *A. turana chorasana* sp. n., *A. farah* sp. n., *A. roxana* sp. n., *A. schah*, *A. stateira* sp. n., *A. iranica*, *A. gedrosiana* sp. n., *A. magnifica* sp. n., *A. brevis kovari* ssp. n., *Agrilus hastulifer aladaghensis*, *Trachys iranica*, *T. sp.* near *punciollis*.

2. Central Asian elements:

Julodis variolaris variolaris, *Acmaeoderella zarudniana*, *A. nivetecta*, *A. flavofasciata tschitscherini*, *Capnodis excisa*, *Sphenoptera morosa* *S. plavilscikovi*, *S. palea*, *S. kaznakovi*, *S. morawitzi*, *S. beckeri*, *S. sowitzi*,

S. viridiaurea, *Melanophila picta picta*, *Anthaxia fedtschenkoi*, *Agrilus validiusculus*, *A. lopatini*, *Meliboeus cyaneus*, *M. amethystinus violaceus*, *Clema deserti*, *Paracylindromorphus transversicollis*, *Habroloma aurea*.

3. Saharian (Sahelian) elements:

Pseudocastalia aegyptiaca, *Xantheremia philistina*, *Acmaeoderella adpersula arabica*, *Sphenoptera fulgens*, *S. parumpunctata*, *S. quetzeli*, *S. cylindricollis*, *Paratassa coroebiformis*, *Anthaxia angustipennis*, *A. congregata*, *Chrysobothris parvipunctata*, *Agrilus lituratus*, *A. purpuratus*, *A. desertus*, *Agrilomorpha rotschildi tassi*.

4. Indian elements:

Sphenoptera perroteti, *S. motschulskyi*, *Chrysobothris beelsoni beelsoni*.

5. Circummediterranean elements:

Ptosima flavoguttata, *Capnodis tenebrionis*, *C. tenebricosa*, *Anthaxia cichorii*, *A. bicolor*, *Agrilus hyperici*, *Coroebus rubi*, *Aphanisticus emarginatus*.

6. East-mediterranean elements:

Julodis onopordi sovitzii, *J. onopordi andreae*, *J. euphratica*, *J. speculifera*, *Acmaeodera edmundi*, *Acmaeoderella vetusta*, *A. boryi*, *Psiloptera argentata*, *Capnodis miliaris miliaris*, *C. carbonaria*, *Aurigena lugubris mutabilis*, *Sphenoptera ethiops*, *S. mnischevi*, *S. oresitropa*, *S. hetita*, *S. ambigua*, *S. elpha*, *S. simulatrix*, *S. mesopotamica*, *S. asiatica*, *Buprestis salomoni*, *Anthaxia puella*, *A. truncata*, *Meliboeus parvulus*, *Trachys ebeniptera*.

7. Caspian arboreal elements:

Julodella dilaticollis, *Acmaeodera araxicola*, *Acmaeoderella serricornis*, *A. elbursi*, *A. gibbula*, *Capnodis anthracina*, *Sphenoptera eugeni*, *S. antiqua ramosula*, *S. anthaxoides*, *S. reitteri*, *S. artemisiae*, *S. sancta*, *Anthaxia diadema shelkovnikovi*, *A. flavicomis*, *Agrilus roscidus sieversi*, *A. hermineus*, *Meliboeus robustus*, *M. reitteri*, *Trachys koenigi*, *T. puncticollis puncticollis*.

8. Eurosibirian elements:

Agrilus viridis.

9. Mongolian elements:

Sphenoptera verecunda.

10. European elements:

Trachys troglodytes.

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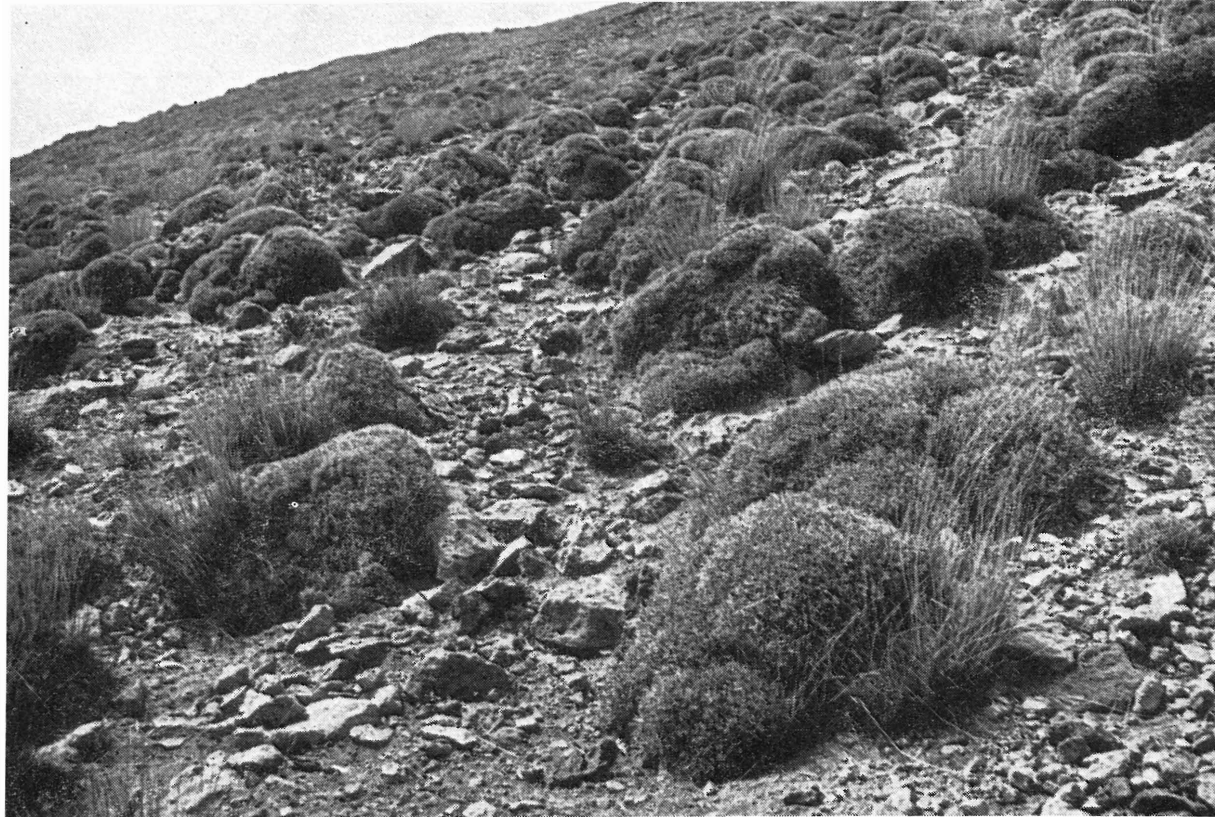


Photo 1: Loc. no. 66: Alborz, Damavand, 2500 m; mountain stony steppe with *Astragalus* sp. and *Acantholimon* sp. Locality of various *Sphenoptera* s. str. (Photo J. Jelínek).

Photo 2: Loc. no. 209: Makran, Bilai; semidesert formation with *Acacia núbica*, *A. arabica* and *Prosopis spicigera*. Locality of *Agrilomorpha rotschildi tassi*, *Anthaxia roxana*, *A. congregata* and *A. angustipennis*. (Photo J. Jelínek).



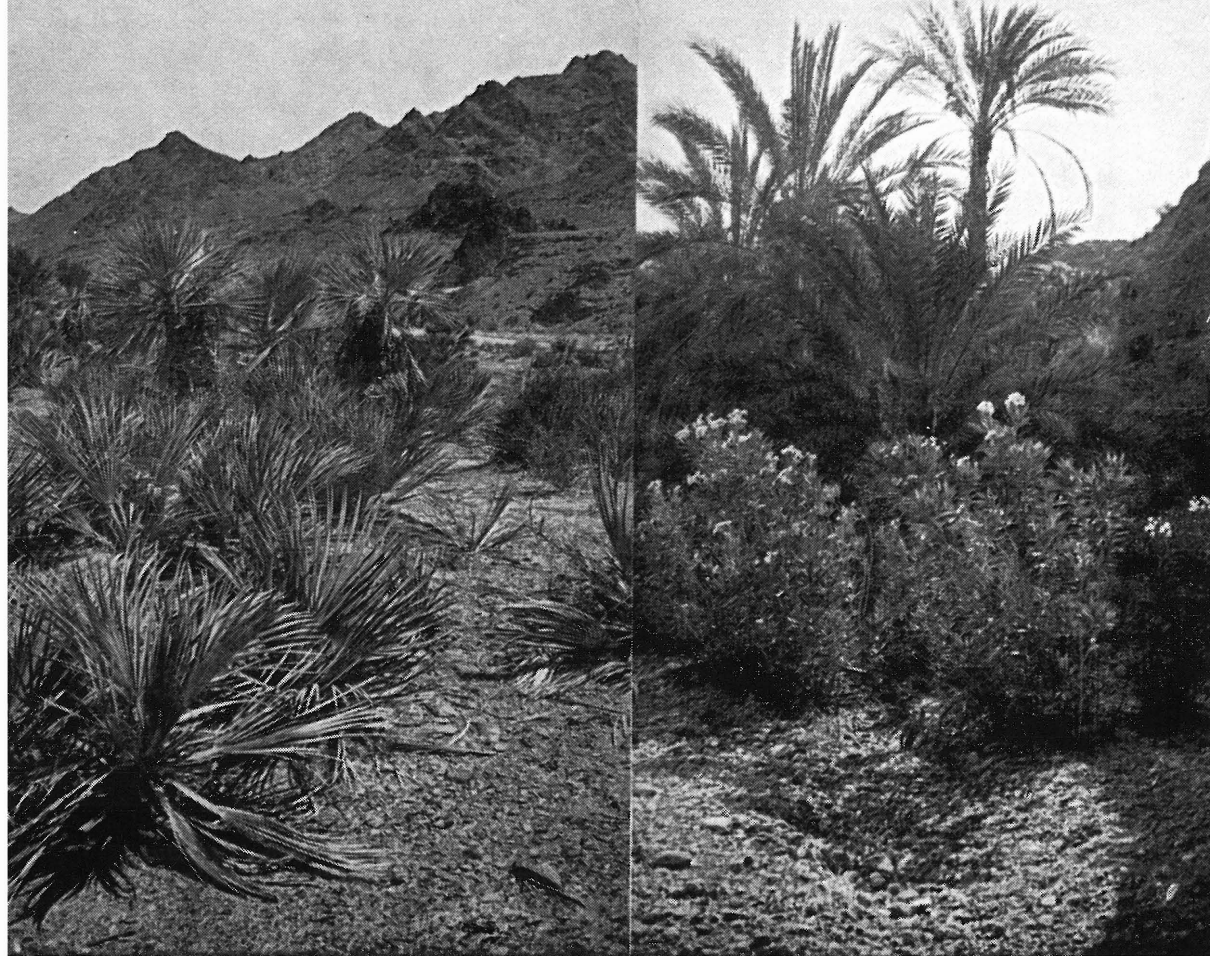


Photo 3: Loc. no. 140: Baluchistan, 21 km S. W. of Saravan; palm *Nannorrhops ritchiana*, host plant of *Acmaeoderella nannorrhopsicola* (Photo J. Jelínek).

Photo 4: Loc. no. 198: Isin, south slopes of Kuhha-ye Genu, 45 km N. W. of Bandar Abbas; date palms and *Nerium indicum kotschyi*, host plant of *Anthaxia iranica*. (Photo J. Jelínek).

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