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## A revision of the genus *Chaetomalachius* Kraatz (Coleoptera, Melyridae, Dasytinae)

by K. Majer

**Abstract:** the genus *Chaetomalachius* is re-defined, keyed, the most important characters are illustrated. Following taxa are described as new to science: *C. reitteri*, *C. jelineki*, *C. aeneolus*, *C. wittmeri*, *C. bilyi*, *C. acutipennis* n.spp.; *C. dispar bodemeyeri* n.ssp.; *Chaetomalachius* (*Setomalachius* subg.n.) *crinipes* Khnz. is synonymized with *C. staudingeri* Schilsky. The species *C. tibialis* Khnz. is eliminated from the genus *Chaetomalachius*.

**Key words:** Coleoptera Melyridae – *Chaetomalachius* – revision – new species – key.

### Introduction

The tribe Chaetomalachiini (MAJER, 1987) includes palearctic genera only; a revision of its nominal genus is the subject of this paper.

The genus *Chaetomalachius* was created as monotypical by Kraatz in 1882; some species described later were classified in the genus *Dasytiscus* (Reitter, 1891) or even in the genus *Dasytes* (Schilsky, 1894). The latter author arranged also a key to species (Schilsky, 1896). *Chaetomalachius* was later examined by Khnzorian (1965) who described several new species, but his paper is not quite applicable.

### Abbreviations used

- DEI = Akademie der Landwirtschaftswissenschaften, Eberswalde, GDR  
KMB = Karel Majer, private collection, Brno ČSR  
MMB = Moravské Muzeum, Brno, ČSR  
NMB = Naturhistorisches Museum Basel, Switzerland  
NMP = Národní Muzeum, Praha, ČSR  
NMW = Naturhistorisches Museum, Wien, Austria  
SNM = Slovenské Národné Múzeum, Bratislava, ČSR  
TMB = Természettudományi Muzeum, Budapest, Hungary  
ZMB = Zoologisches Museum, Humboldt Universität, Berlin, GDR
- AL = length of antenna  
EL = maximal length of elytra  
EW = maximal width of elytra  
HW = maximal width of head  
PL = maximal length of pronotum  
PW = maximal width of pronotum

### List of localities

Many not so well-known localities in Soviet Central Asia are spelt in different ways. The following list will help to find them on the map.

- Akkol: 75 km NW Djambul, Kazakhstan  
 “Ak-Sou Thal” = river Yakhsu, Kulyab, Tadjikistan  
 Ak-Tash (800–1500 m): 70 km NE Tashkent, Uzbekistan  
 “Alai” = Alaiski khrebet (N Tadjikistan and S Kirghizia)  
 “Alexander Gebirge” – recently a part of Kirghizski khrebet  
 Aman Kutan (1500 m): 40 km SWS Samarkand, Uzbekistan  
 Annau (Kara-kum desert): 15 km SE Askhabad, Turcmenia  
 “Araxesthal” = Araks valley, S Caucasus, Armenia  
 Assa: 25 km NW Djambul, Kazakhstan  
 “Aulie-Ata” = Djambul, Kazakhstan  
 Babatak khrebet: 60 km SW Dushanbe (S of Gissar), Tadjikistan  
 Bezh (Bizh) – Barma: Zarat, 75 km NW Baku, Azerbaidjan  
 Budschnurd (= Boinurd), Ala-Dagh: 110 km SW Askhabad, Iran (Khorasan)  
 “Buchara” = formerly nearly whole Tadjikistan and S Uzbekistan  
 Bulbulchashma: 10 km SW Gissar, Babatak khrebet, Tadjikistan  
 Chimgan (= Bolshoi Chimgan), 2000–2500 m: 90 km NEE Tashkent, Uzbekistan  
 “Chodschkent” = Leninabad, Tadjikistan  
 “Dschebell” = Djebel (settlement), W slope of Bolshoi Balkhan, Turcmenia  
 Firyuza (Kopet-Dagh): 20 km NW Askhabad, Turcmenia  
 Gandjina: 25 km NW Kurgan Tyube, Tadjikistan  
 Garavuti (Aruk-Tau Mts.): 45 km SW Kurgan Tyube, Tadjikistan  
 Gushara (1300–1600 m): 50 km N Dushanbe, Tadjikistan  
 “Gr. Balachan” = Bolshoi Balkhan (hills, cca 1800 m), Western Turcmenia  
 Golodnaya step: Syr Darya, Kazakhstan  
 Iskandar (= Iskander): 35 km NE Tashkent, Uzbekistan  
 Kadamzhai: 50 km SW Fergana, Kirghizia  
 “Kara-tag” = Tursunzade, 50 km W Dushanbe, Tadjikistan  
 Kara-tau khrebet: near Djambul, Kazakhstan  
 “Karateghin” = Karateghinski khrebet (Khozratisho khrebet), NE Dushanbe, Tadjikistan  
 Kara-tepe (1000 m): 35 km SWS Samarkand, Uzbekistan  
 Khamzabad: 50 km S Fergana, Uzbekistan  
 Khiva (“Chiva”): Kara-kum desert, 30 km SW Urgench, Uzbekistan  
 Kondara (1500 m): 50 km N Dushanbe, Tadjikistan  
 Kuyuk-pass (Kara-tau khrebet): 40 km SW Djambul, Kazakhstan  
 “Kyndyr-T.” = oasis Kyndyr, 270 km SE Aral Sea, Uzbekistan  
 “Ljutfabad” = Lotfabad, 100 km SE Askhabad, Kopet-Dagh, N Iran  
 “Margelan” = Margilan, 10 km NW Fergana, Uzbekistan  
 “Meskisch Geb.” = Meskhetski khrebet, Caucasus, Georgia  
 “Nuschkent” = recent wording and location remain unknown to me  
 Pendjikent: 60 km SEE Samarkand, Tadjikistan  
 Romit (= Ramit): near Yavroz, 55 km NEE Dushanbe, Tadjikistan  
 Saramsakli: near Gorgan, Western Kopet-Dagh, NE Elborz, Iran  
 Semiganch (settlement): 40 km NE Dushanbe, Tadjikistan  
 Shaartuz: 90 km SE Kurgan Tyube, Tadjikistan  
 “Sussamyr-Ketmen Tjube” = Kara-Kul: 100 km NNE Andijan, Kirghizia  
 Syr-Darya (settlement and river): 75 km SW Tashkent, Uzbekistan

Takhtakaragh pass (= Takhta-Karacha) 1675 m: 45 S Samarkand, Uzbekistan  
 Takhtaul (khrebet Sarsaryak): 10 km SW Nurek, Tadjikistan  
 Takob (Hissar Mts): 30 km NNE Dushanbe, Tadjikistan  
 Tokmak: 60 km E Frunze, Kirghizia  
 "Tschingart" = Chimagart (settlement and hill): 60 km SE Pendzhikent, Uzbekistan  
 "Tschitschantan, Nufswald" = a chestnut forest about 90 km NE Andijan, Kirghizia  
 "Turkestan" = formerly a greater part of Central Asia  
 Uyuk: 100 km N Djambul, Kazakhstan  
 Varzob: 25 km N Dushanbe, Tadjikistan  
 "Wernoje" = Alma Ata, Kazakhstan  
 Yavroz (1300–1500 m): 50 km NEE Dushanbe, Tadjikistan  
 Yordon (= Yordan) (2500 m): 50 km S Fergana, Kirghizia  
 Ziddi (brook and settlement): 55 km N Dushanbe, Tadjikistan

### Descriptive part

#### Genus *Chaetomalachius* Kraatz

Type-species: *Chaetomalachius dasytoides* KRAATZ, 1882 (by monotypy).  
*Chaetomalachius* Kraatz, 1882, D.Ent.Z.26: 96. – SCHILSKY, 1896, Die Käfer Europa's 32: 50. – JAKOBSON, 1911, Zhuki Rossii Zapad Europ. 700. – Khnzorian, 1965, L'Entomologiste 21 (4–5): 77.

The genus *Chaetomalachius* may be distinguished from all palearctic genera as follows:

Pronotum with submarginal lines (Fig. 1.) dividing punctate disc from irregularly wrinkled lateral areas; proximally the ribs continue as basal border of pronotum. Elytra with double vestiture: (a) basal, recumbent, very short, fine, dense, whitish; (b) erect, long, stout, black (exceptionally also pale) (Fig. 1). Epipleura wide, terminating at elytral apex (Fig. 18).

Tegmen with minute phallobase (e.g. Fig. 29). Phallus with base swollen ventrally (e.g. Fig. 287), it is never differentiated by a notch. Wings (Fig. 14): Transverse vein in anal area unpigmented, merely indicated; no rudiment of  $M_1$  situated in the inflexion of vein M. Sexual dimorphism externally only weakly developed: males mor slender, posterior femora stouter, antennal segments less transverse. Coloration black with various reflexes, pedicel sometimes (rarely even a greater part of the extremities) mor or less brightly orange, often merely rufescent or only dark. For general morphological orientation see Figs 2–35.

The genus comprises 2 subgenera, 20 species and 1 subspecies. The species *Chaetomalachius tibialis* Khnzorian, 1965, does not belong in this genus and will be transferred into another genus.

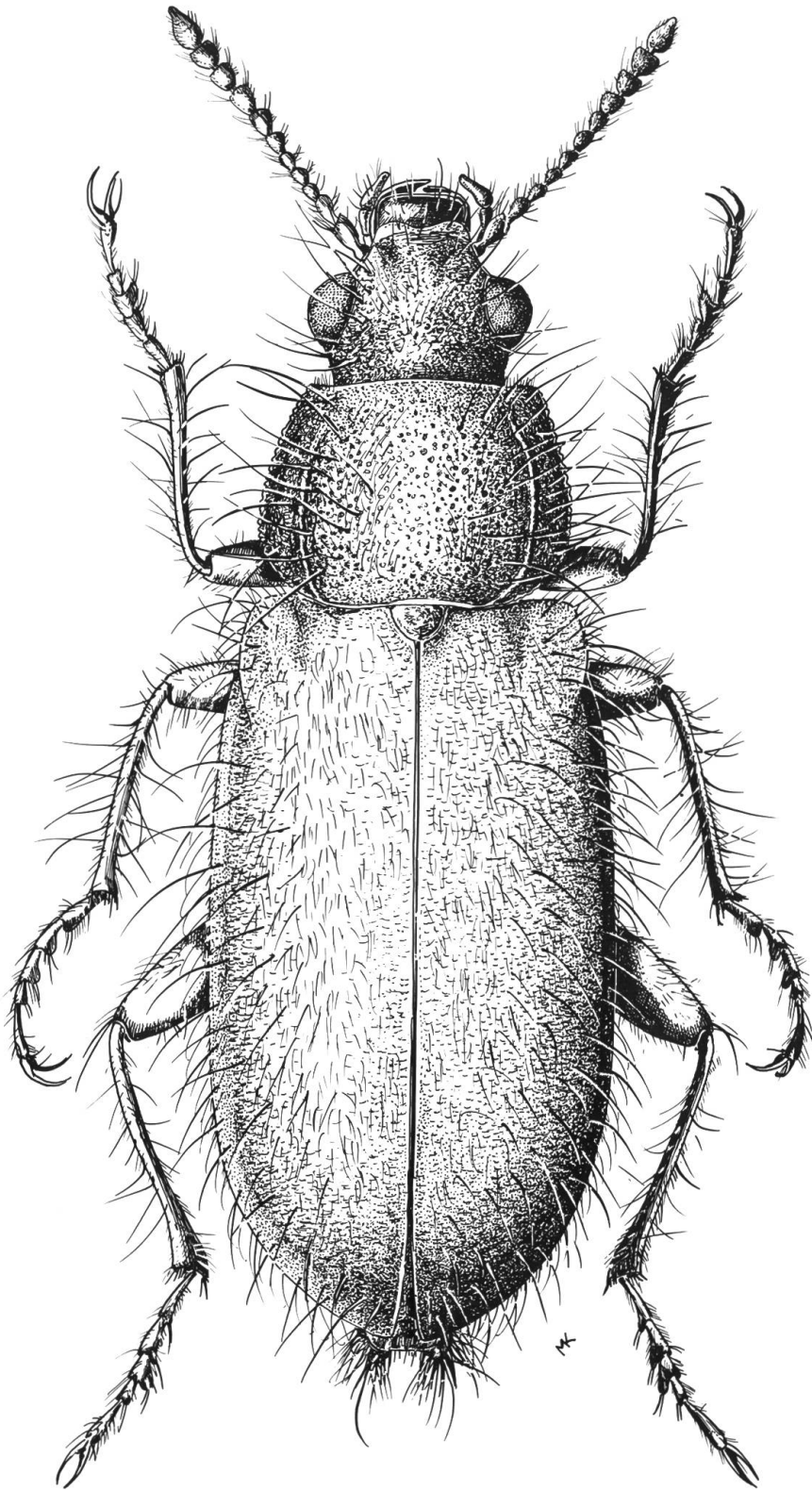
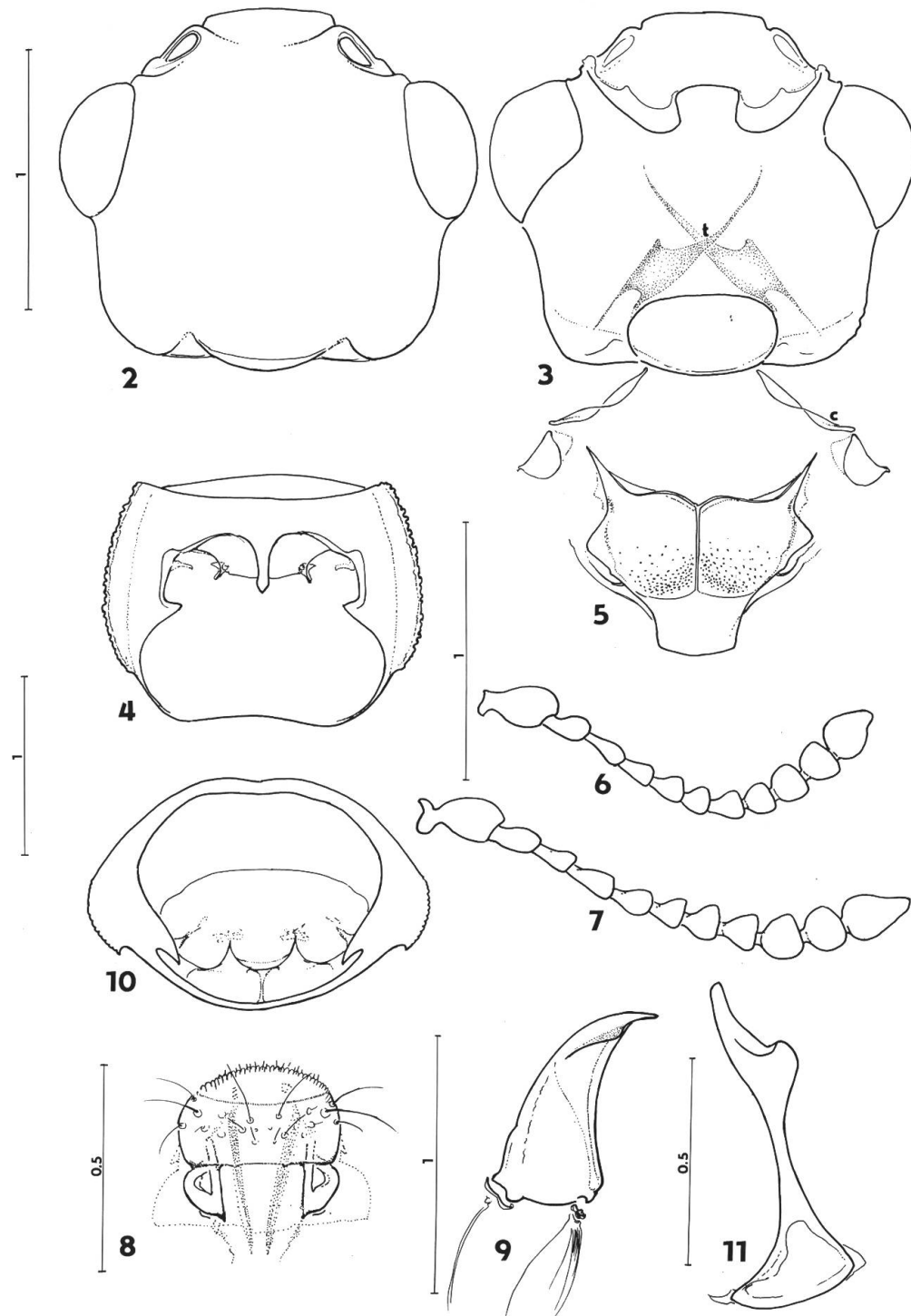


Fig. 1: *Chaetomalachius dasytoides* Kraatz, ♂, general view (length = 5.2 mm).

Distribution of the genus (Figs 297, 298) is palearctic (predominantly Central Asia). Several species occur in Syria, Turkey, and Lebanon. Records from Greece and Egypte are improbable.

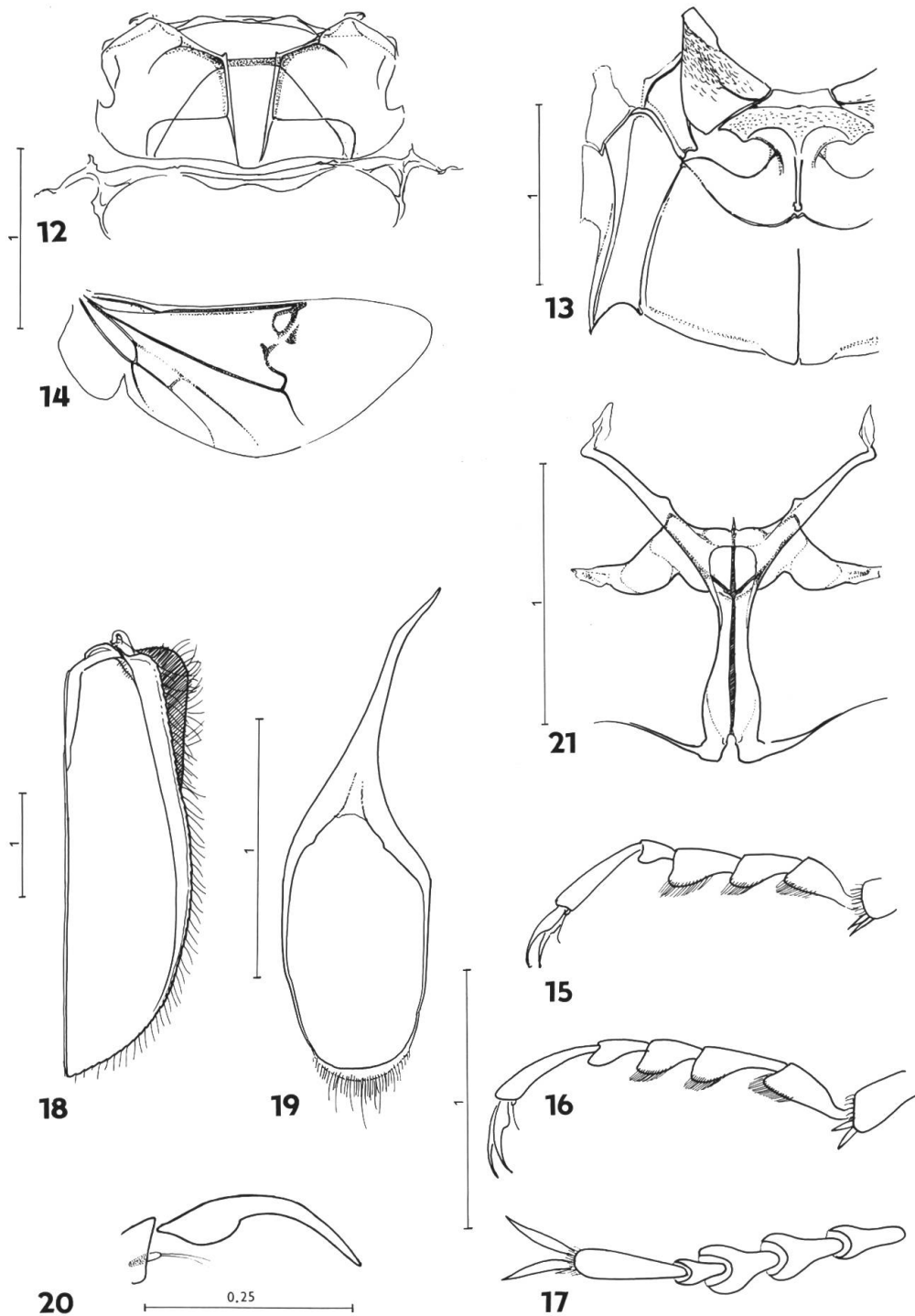
### Key to species

- |   |  |    |
|---|--|----|
| 1 | Upper body surface at least with admixed pale bristles . . . . .   | 2  |
| – | Coarse pubescence of upper surface only black . . . . .  | 3  |
| 2 | Antenna from segment 2, tibiae and tarsi reddish: upper body surface with brassy lustre. Turcmenia.  |    |
|   | 15. <i>C. ruficornis</i> Schilsky  |    |
| – | Antenna from segment 3, and legs black, lustre greenish. Iran.   |    |
|   | 4. <i>C. jelineki</i> n. sp.   |    |
| 3 | Puncturation of elytra coarse (Figs 39, 45, 59, 83, 92, 104), pedicel mostly brightly orange . . . . .   | 4  |
| – | Puncturation of elytra finer . . . . .   | 10 |
| 4 | Upper body surface with deep-bluish lustre . . . . .   | 5  |
| – | Upper body surface with another lustre . . . . .   | 7  |
| 5 | Pedicel brightly orange, disc of pronotum very coarsely and regularly punctate (Fig. 38)   |    |
|   | 1. <i>C. reitteri</i> n. sp.   |    |
| – | Pedicel at most deep-brown, disc of pronotum punctate more finely (Figs 91, 103) . . . . .   | 6  |
| 6 | Side margins of pronotum coarsely crenate, pronotum less transverse, on the sides at base slightly emarginate (Fig. 90). Near East.                                |    |
|   | 6. <i>C. cyanellus</i> (Kiesw.)  |    |
| – | Side margins of pronotum finely crenate, pronotum more transverse, on sides at base more conspicuously emarginate (Fig. 102). Caucasus and Turcmenia (Kopet-Dagh). |    |
|   | 7. <i>C. marginicollis</i> (Reitter)   |    |
| 7 | Base of pronotum as wide as apex, lateral margins of pronotum nearly smooth (Figs 81, 82). Iran.   |    |
|   | 5. <i>C. kotschyi</i> (Schilsky)   |    |
| – | Base of pronotum narrower than apex, side margins of pronotum distinctly crenate . . . . .   | 8  |
| 8 | Pedicel dark, side margins of pronotum coarsely irregularly crenate (Fig. 43). Elytra extraordinarily coarsely punctate (Fig. 45).                                 |    |
|   | 2. <i>C. punctatus</i> Schilsky  |    |
| – | Pedicel orange, side margins of pronotum regularly crenate (Figs 57, 66), elytra less coarsely punctate . . . . .  | 9  |



Figs 2–11: *Chaetomalachius dasytoides* Kraatz: 2, cranium, dorsal view. 3, cranium, ventral view (t, tentorial cross-bar, c, cervical sclerites). 4, pronotum, ventral view. 5, mesoscutellum. 6, female antenna. 7, male antenna. 8, labrum. 9, left mandible, dorsal view. 10, pronotum, frontal view. 11, left front trochantin. (Scale = 1 mm).

- 9 Base of pronotum emarginate at hind angles; lateral sides strongly arcuate (Fig. 57). 3a. *C. dispar dispar* Schilsky
- 9 Base of pronotum not emarginate; sides less arcuate (Fig. 66).  
3b. *C. dispar bodemeyeri* n. ssp.
- 10 Body with brassy, bronze or green-brassy lustre . . . . . 11  
– Body with blue, bluish-green or plumbeous lustre . . . . . 13
- 11 Elytra very shallowly punctate, puncturation nearly imperceptible (Fig. 265). Pronotum strongly narrowed forwards (Fig. 263), its lateral areas inconspicuously wrinkled (Fig. 264). 19. *C. insidiosus* Khnzorian
- Elytra conspicuously punctate. Pronotum less narrowed forwards, lateral areas distinctly wrinkled . . . . . 12
- 12 Pedicel red-brown. Pronotum scarcely transverse (Fig. 239)  
1) 17. *C. bilyi* sp. n.
- Pedicel blackish, pronotum more transverse (Fig. 220).  
16. *C. aeneolus* n. sp
- 13 Side margins of pronotum in male nearly smooth, disc of pronotum with particular double punctures (Figs 275, 276). Penultimate antennal segment in females longer than wide. Middle tibia in males with cluster of hairs on outer side (Fig. 279). 20. *C. staudingeri* Schilsky
- Side margins of pronotum in males distinctly crenate. Disc of pronotum with different puncturation. Penultimate antennal segment in females mostly as wide as long or transverse. Middle tibia in males normally pubescent . . . . . 14
- 14 Body with deep-blue or azure lustre having sometimes greenish tinge . . . . . 15  
– Body with plumbeous, brassy-green to plumbeous-green lustre . . . . . 16
- 15 Lateral areas of pronotum broad (Fig. 252). Elytra very flatly punctate (Fig. 254). Males: apex of each elytron obliquely truncate and pointed (Fig. 256). 18. *C. acutipennis* n. sp.
- Lateral areas of pronotum less extensive (Fig. 192). Elytra more distinctly punctate (Fig. 194). Males: elytra apex regularly rounded. 14. *C. hauseri* Schilsky
- 16 Apex of pronotum nearly straight, anterior angles indicated, sides slightly narrowed forwards (Figs 1, 22). 9. *C. dasytoides* Kraatz
- Pronotum not conically narrowed forwards, apex at least subarcuate . . . . . 17



Figs 12–20: *Chaetomalachius dasytoides* Kraatz: 12, metanotum. 13, mesothorax and metathorax, ventral view. 14, right wing. 15, 17, male front tarsus. 16, male hind tarsus. 18, left elytron, ventral view. 19, spicular fork (lectotype). 20, male front claw, side view. (Scale = 1 mm).

- 17 Disc of pronotum very regularly punctate (Fig. 146), puncturation of elytra rather coarse (Fig. 147).  
 11. *C. klapperichi* Khnzorian
- Disc of pronotum with different puncturation, elytra punctate more finely . . . . . 18
- 18 Punctures on disc of pronotum very dense (nearly touching one another) and raised (Figs 175, 176). Penultimate segments of male antenna transverse. 13. *C. forticornis* Schilsky
- Punctures on disc different. Penultimate segments of male antenna at most as long as wide . . . . . 19
- 19 Pronotum strongly transverse, narrowed towards apex (chiefly in females, Fig. 159), body with light-green lustre, fine vestiture on pronotal disc entirely decumbent, distinctly directed forwards. 12. *C. bactrianus* Khnzorian
- Pronotum less transverse, body mostly with deeper lustre, fine hairs on pronotal disc less decumbent and irregularly arranged. . . . . 20
- 20 Disc of pronotum with raised dots (Figs 116, 117, 119), pronotum transversely ovate; pale hairs on elytra entirely decumbent, finer; reliably distinguishable by terminalia only (Figs 123–125, 129–131). 8. *C. aeneolus* n. sp.
- Disc of pronotum with no raised dots (Fig. 134). For terminalia see Figs 136, 137, 140, 141–143. 10. *C. wittmeri* n. sp.

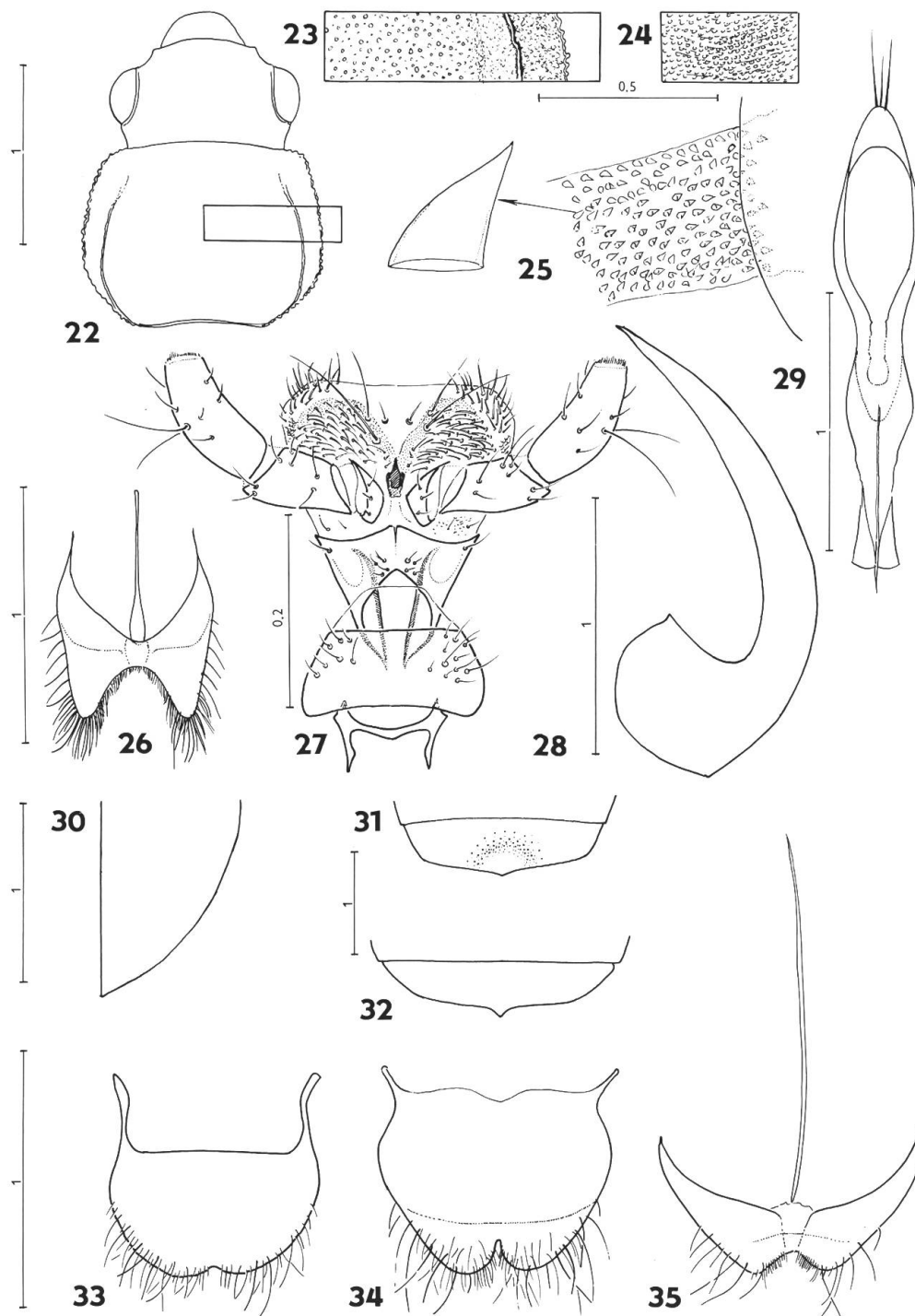
### Subgenus *Chaetomalachius* Kraatz, 1882

Sexual dimorphism externally weakly developed. Middle tibia in males normally pubescent on innerside, pygidium with short basal corners, spicular fork semicircular at apex, fork proper nearly as long as spiculae. Sternum VIII in male neither distinctively excavate nor deeply emarginate. Phallus neither distinctively narrowed nor strongly bent. Metasternum mediodistally at most with feeble impression (in *C. bactrianus* Khnzor. and *C. aeneolus* n. sp.).

#### 1. *Chaetomalachius reitteri* n. sp.

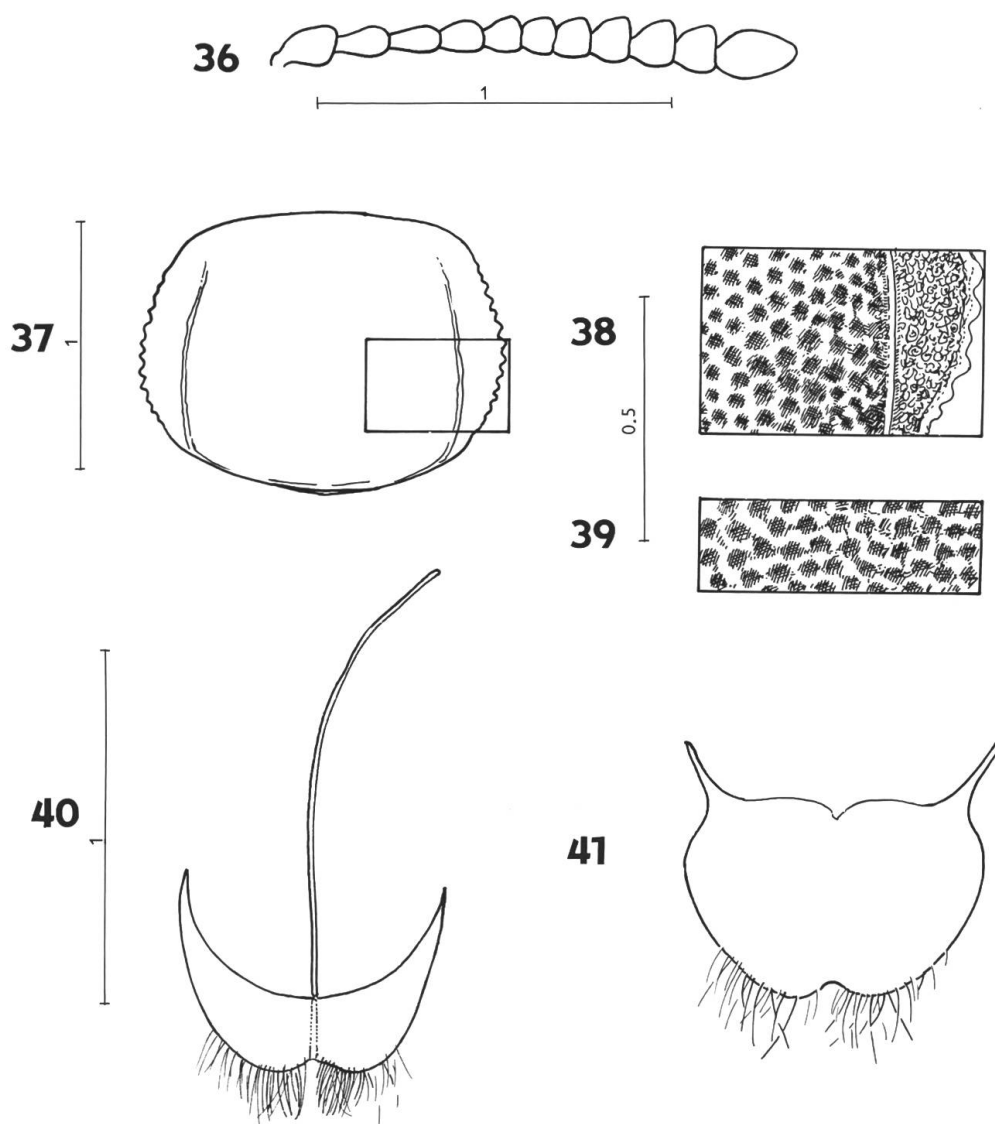
Figs 36–41.

Easily distinguishable from all species of this genus by combination of deep-blue lustre, very coarsely punctate pronotal disc (Fig. 38) and orange pedicel.

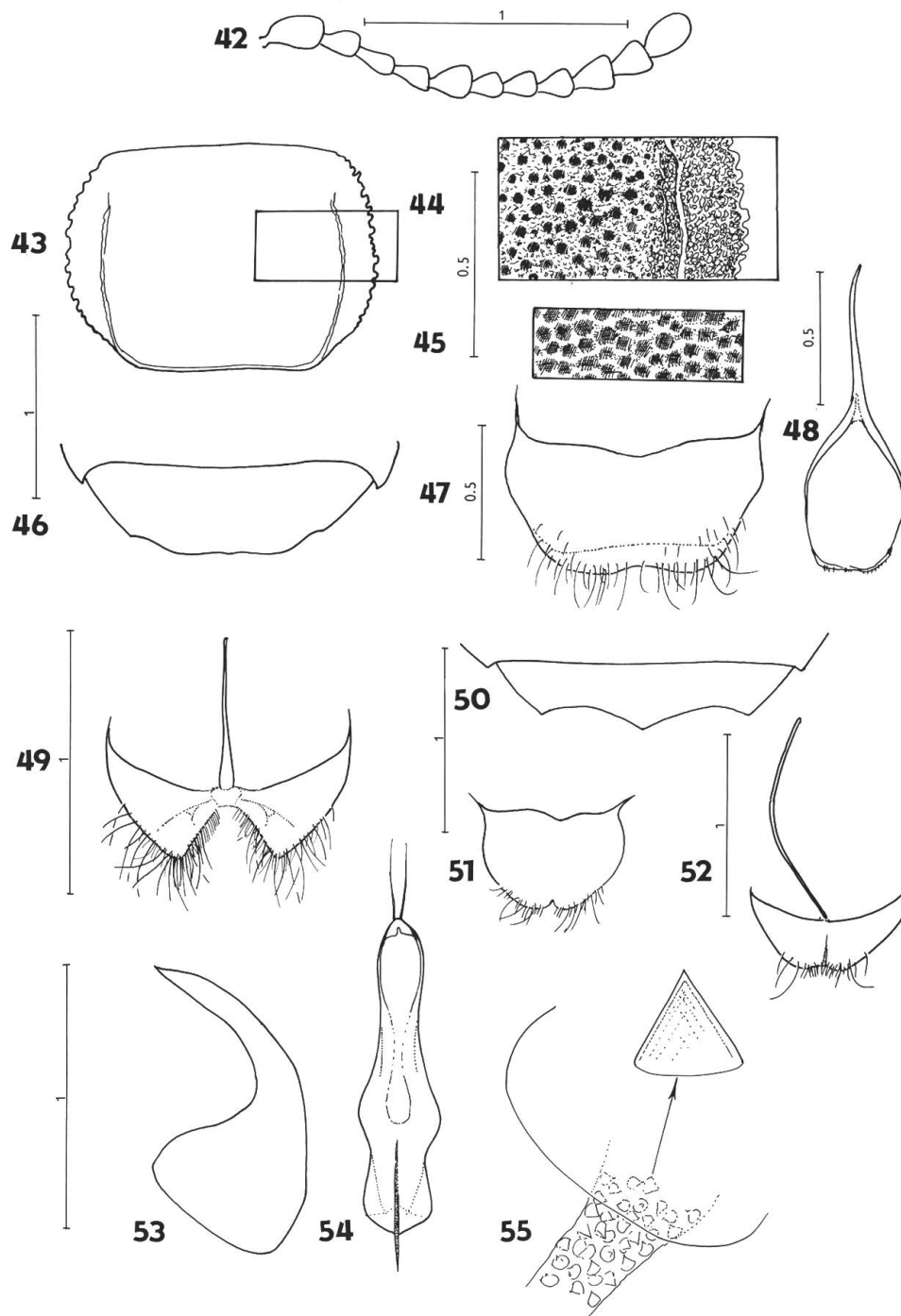


Figs 22–35: *Chaetomalachius dasytoides* Kraatz: 22, outline of head and pronotum (lectotype). 23, pronotal puncturation (lectotype). 24, elytral puncturation. 25, internal sac (lectotype). 26, male sternum VIII (lectotype). 27, labium. 28, phallus, side view (lectotype). 29, tegmen, ventral view (lectotype). 30, apex of right elytron (lectotype). 31, male sternum VII (lectotype). 32, female sternum VIII. 33, male pygidium (lectotype). 34, female pygidium. 35, female sternum VIII. (Scale = 1 mm).

Holotype, ♀. Subparallel, slightly widened posteriorly, strongly convex. Coloration black with deep-blue lustre having greenish tinge; pedicel orange. Puncturation coarse and dense (Figs 38–39). Pale pubescence short and decumbent; the black one is coarse, suberect, sparse (about 100 hairs on each elytron). Head with feeble impressions beside antennal sockets, punctures wrinkled and somewhat finer than those on pronotum; antennal segments 6–10 feebly transverse (Fig. 36).



Figs 36–41: *Chaetomalachius reitteri* n.sp. holotype ♀: 36, right antenna, 37, pronotum. 38, pronotal puncturation. 39, elytral puncturation. 40, sternum VIII. 41, pygidium (Scale = 1 mm).



Figs 42–55: *Chaetomalachius punctatus* Schilsky (42–49, 53–55 lectotype): 42, right antenna. 43, pronotum. 44, puncturation of pronotum. 45, puncturation of elytra. 46, male sternum VII. 47, male pygidium. 48, spicular fork. 49, male sternum VIII. 50, female sternum VII. 51, female pygidium. 52, female sternum VIII. 53, phallus, side view. 54, tegmen, ventral view. 55, internal sac. (Scale = 1 mm).

Pronotum scarcely transverse, arcuate on side margins and at base (Fig. 37), upper surface without incurved ribs; disc coarsely punctate (Fig. 38), punctures as wide as intervals between them. Elytra with prominent humeri, their puncturation finest at base, coarser and confluent behind humeri (Fig. 39), and finer again towards apex. Apices of elytra rounded respectively.

Pygidium as figured (Fig. 41), sternum VII as in *C. punctatus* Schils., sternum VIII (Fig. 40) medially with a longitudinal line.

Measurements: Length/AL = 4.00; AL/PL = 1.14; PW/HW = 1.48; PW/PL = 1.48; EL/PL = 3.33; EW/PW = 1.67; length = 4.77 mm; width = 1.92 mm.

Holotype ♀ (TMB): "Caucasus Araxesthal, Leder Reitter"; "Chaetomalachius dispar Schilsky" (Reitter's MS).

Distribution (Figs 296, 297): Caucasus.

## 2. *Chaetomalachius punctatus* Schilsky

Figs 42–55.

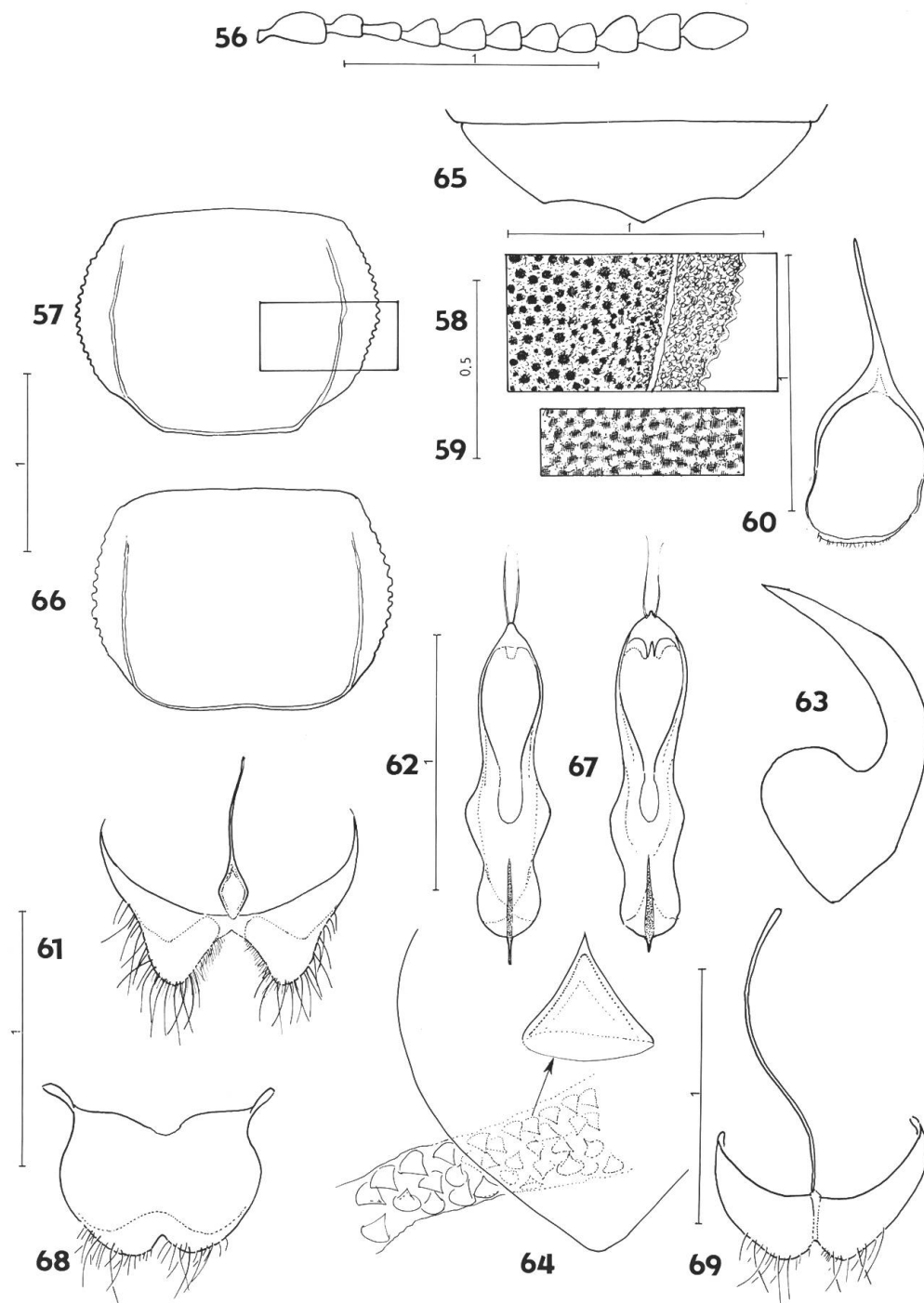
*Chaetomalachius punctatus* SCHILSKY, 1896, Die Käfer Europa's 32: 55.

Distinguishable by entirely dark pedicel and irregularly denticulate side pronotal margins (Figs 43, 44).

Broad, moderately convex. Upper body surface black, with greenish lustre having a blue tinge. Puncturation coarse and dense. Black lustre having a blue tinge. Puncturation coarse and dense. Black vestiture denser than in the preceding species. Antennae have not very transverse segments (Fig. 42). Side margins of pronotum coarsely and irregularly crenate (Fig. 43), disc punctate more finely than elytra, intervals between punctures with microsculpture, nearly mat (Fig. 44). Elytra coarsely punctate (Fig. 45), apices rounded respectively.

♂. More parallelsided, antennal segments not transverse (Fig. 42). Pygidium strongly transverse (Fig. 47). Sternum VII weakly emarginate at sides (Fig. 46), sternum VIII angularly emarginate, medial process swollen at base (Fig. 49). Tegmen (Fig. 54) narrowed distally, with two setae at apex. Phallus as figured (Fig. 53), internal sac with short, conical spines (Fig. 55). Measurements: length/AL = 3.75; AL/PL = 1.33; PW/HW = 1.73; HW/PL = 1.73; EL/PL = 3.00; EW/PW = 1.08; EL/EW = 1.61; length = 5.46 mm; width = 2.15 mm.

♀. More widened posteriorly, less convex, antennal segments transverse. Pygidium deeply emarginate at apex (Fig. 51). Sternum VII emarginate on the sides of apex, sternum VIII medially with a rudiment of an



Figs 56–64: *Chaetomalachius dispar dispar* Schilsky (Holotype ♂); 65–69: *Chaetomalachius dispar bodemeyeri* n. ssp. (66, 67 holotype): 56, right antenna. 57, 66, pronotum. 58, puncturation of pronotum. 59, puncturation of elytra. 60, spicular fork. 61, male sternum VIII. 62, 67, tegmen, ventral view. 68, female pygidium. 69, female sternum VIII (Scale = 1 mm).

elongate pale line (Fig. 52). Measurements: length/AL = 4.23; AL/PL = 1.06; PW/HW = 1.50; PW/PL = 1.31; EL/PL = 2.88; EW/PW = 1.43; EL/EW = 1.53; length = 5.54 mm; width = 2.31 mm.

Holotype ♂ (ZMB) "Ägypten, Reitter"; "punctatus \* Schils." "Graecia, Reitter", 1 ♀.

Distribution (Fig. 296): Egypt, ?? Greece.

Remarks: Schilsky (1896: 55) did not know the female in the year of description of this species; the female specimen therefore does not belong in the type-material. A confusion of the locality in both specimens cannot be excluded.

### 3a. *Chaetomalachius dispar dispar* Schilsky Figs 56–64.

*Chaetomalachius dispar* SCHILSKY, 1896, Die Käfer Europa's 32: 54.

Differs from the preceding species by orange pedicel and pronotum regularly crenate on side margins.

Elongate, strongly convex species. Coloration black with light, green lustre having plumbeous tinge; pedicel brightly orange. Puncturation coarse and dense, somewhat finer than in *C. punctatus*; black suberect setae less dense. Head more finely punctate than pronotum; antennal segments more rounded than in *C. punctatus*. Disc of pronotum finely punctate (Fig. 58), side margins less regularly crenate (Fig. 57). Elytra not very coarsely punctate (Fig. 59), apices rounded respectively.

♂. More parallelsided, antennal segments more elongate (Fig. 56). Sternum VII nearly as in *C. punctatus*, medial process of VIII with rhombic base (Fig. 61). Spicular fork as shown (Fig. 60). Tegmen with two setae at apex (Fig. 62). Phallus as shown (Fig. 63); internal sac (Fig. 64) with spines nearly of the same shape as in *C. punctatus*.

Measurements. Length/AL = 3.55; AL/PL = 1.33; PW/HW = 1.37; PW/PL = 1.43; EL/PL = 3.00; EW/PW = 1.25; EL/EW = 1.67; length = 4.92 mm; width = 2.00 mm.

Holotype ♂ (ZMB) "Wähler, Persien"; "*dispar* \* Schils."

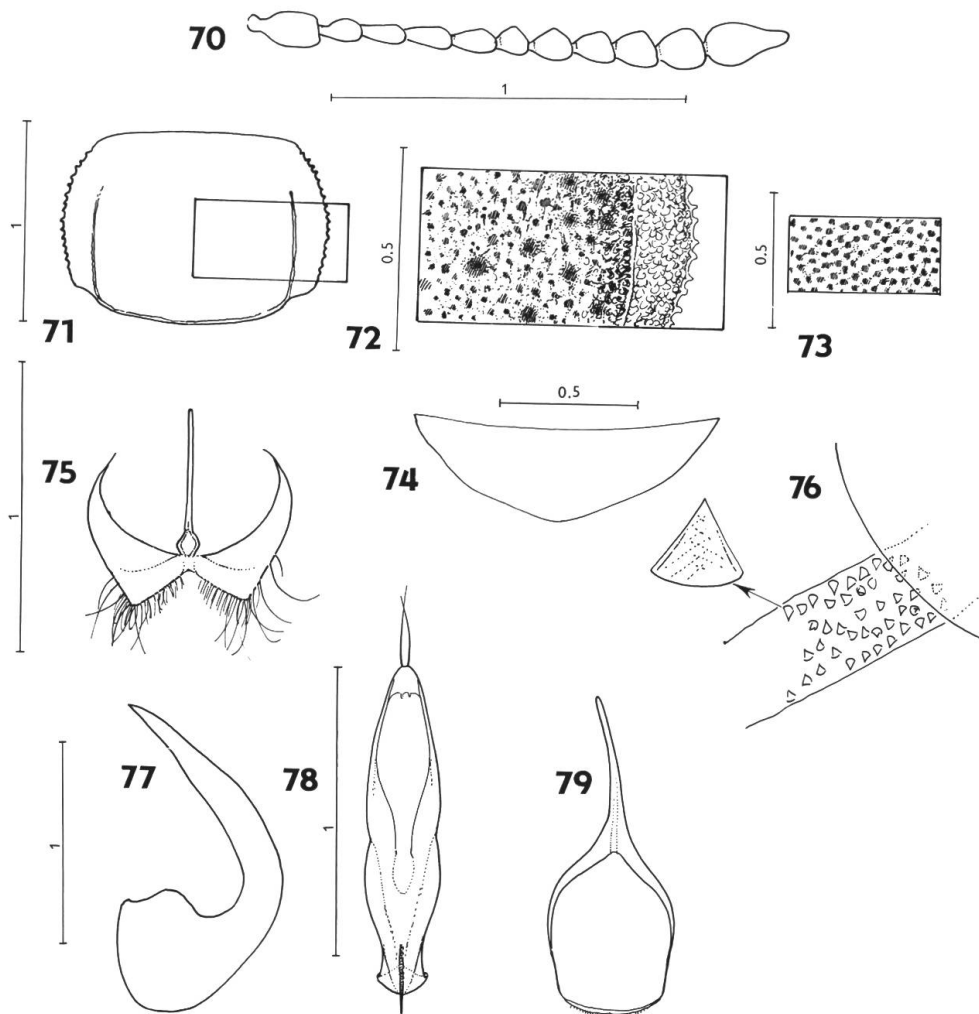
Distribution (Fig. 297): Iran.

Remarks: As SCHILSKY (1896) mentioned two type-specimens, one specimen is probably lost.

### 3b. *Chaetomalachius dispar bodemeyeri* n. ssp. Figs 65–69, 294.

Differs from *C. dispar dispar* by more intensive lustre, different shape of pronotum (Fig. 66), intervals between punctures on pronotal disc nearly smooth; male with different tegmen.

Elongate, strongly convex. Coloration black with conspicuous yellowish-plumbeous lustre having feeble greenish tinge; pedicel orange, flagellum and base of antenna somewhat brownish. Punctuation dense and regular. Head finely and densely punctate, antenna as in *C. dispar dispar* (Fig. 56). Pronotum slightly transverse (Fig. 66), evenly arcuate at sides, submarginal lines less distinct than in *C. dispar dispar*, pronotal disc more finely punctate, intervals between punctures nearly smooth. Elytra more coarsely punctate than pronotum, more finely than in *C. dispar dispar*, strongly narrowed posteriorly, their apex broadly rounded.



Figs 70–79: *Chaetomalachius jelineki* n. sp. (holotype ♂): 70, right antenna. 78, outline of pronotum. 72, punctation of pronotum. 73, punctation of elytra. 74, male sternum VII. 75, male sternum VIII. 76, internal sac. 77, phallus, side view. 78, tegmen, ventral view. 79, spicular fork.

♂. Tegmen of different shape (Fig. 67). Measurements. Length/AL = 3.50; AL/PL = 1.28; PW/HW = 1.33; PW/PL = 1.28; EL/PL = 2.84; EW/PW = 1.22; EL/EW = 1.82; length = 5.38 mm; width = 1.92 mm.

♀. Antennal segments more transverse, elytra more convex. Pygidium, sternum VII and VIII as shown (Figs 65, 68, 69). Ovipositor as shown (Fig. 294). Measurements. Length/AL = 4.77; AL/PL = 1.00; PW/HW = 1.15; PW/PL = 1.33; EL/PL = 3.05; EW/PW = 1.39; EL/EW = 1.54; length = 4.77 mm; width = 1.92 mm.

Holotype ♂ (TMB) "v. Bodemeyer, Persien, Luristan"; "dasytoides Kr.". Allotype ♀ (TMB) with data as Holotype. Paratype ♀ (KMB): "Syrien, Bodemeyer".

Distribution (Figs 296, 297): Iran (Luristan), Syria.

#### 4. *Chaetomalachius jelineki* n. sp.

Figs 70–79.

Remarkable by combination of intermixed coarse pale setae, black pedicel, fine puncturation of elytra (Fig. 73), and pronotal disc regularly punctate (Fig. 72).

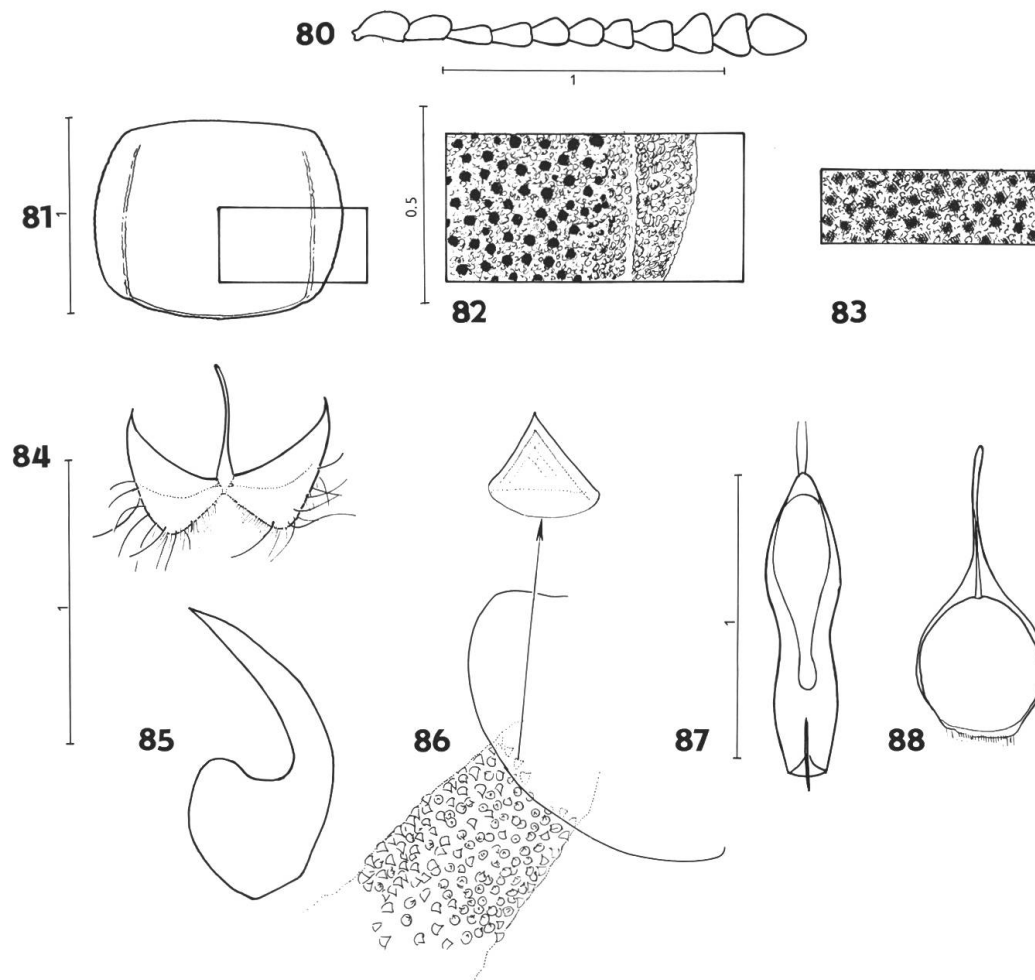
Elongate, strongly convex. Coloration black with faint light-greenish bluish lustre having plumbeous tinge. Puncturation of head and pronotum (Fig. 72) irregular. Elytra not coarsely punctate (Fig. 73), basal pale pubescence rather suberect, the coarse one black, relatively sparse and short, with intermixed pale setae. Head somewhat more finely punctate than pronotum which is transverse, obtusely serrate on side margins (Fig. 71), disc of pronotum irregularly punctate (Fig. 72), intervals between punctures wrinkled.

♂. Parallel, strongly convex. Antennal segments not transverse (Fig. 70). Sternum VII shown (Fig. 74), VIII (Fig. 75) with dilated base of medial process. Spicular fork shown (Fig. 79). Tegmen slender (Fig. 78). Phallus with emarginate base (Fig. 77), internal sac as shown (Fig. 76). Measurements. Length/AL = 3.20–3.50; AL/PL = 1.35–1.67; HW/PW = 1.20–1.35; PE/PL = 1.30–1.44; EL/PL = 3.10–3.44; EW/PW = 1.08–1.35; EL/EW = 1.77–1.82; length = 4.13–4.17 mm; width = 1.52–1.56 mm.

♀. Widened posteriorly, antennal segments nearly transverse. Terminalia as in *C. dispar*. Measurements: Length/AL = 3.65–4.00; AL/PL = 1.14–1.30; PW/HW = 1.42–1.57; PW/PL = 1.23–1.30; EL/PL = 2.95–3.25; EW/PW = 1.46–1.54; EL/EW = 1.50–1.71; length = 3.91–5.00 mm; width = 1.65–1.78 mm;

Types (4♂, 26♀): Holotype ♂ (NMP): “C. Iran, Qanat Marvan, 2850 m, 22.–24.5.1977, loc.no.345, Exp.Nat.Mus.Praha”. 3♂ and 17♀ paratypes (1♂ and 1♀, KMB; 1♀, NMB; 2♂ and 15♀, NMP) with data as Holotype. Allotype ♀ and 6♀ paratypes (NMP): “C. Iran, 3200–3800 m, Kuh-e-Lalehzar, N slope, 24.–30.5.1977, loc.no.348, Exp.Nat.Mus.Praha”. 2♀ paratypes (NMP): “E Iran, Deh-Bakri, 1700–1750 m, 30.4.–3.5.1973, loc.no. 186, Exp.Nat.Mus.Praha”.

Distribution (Fig. 297): Iran.



Figs 80–88: *Chaetomalachius kotschyi* Schilsky (holotype ♂): 80, right antenna. 81, outline of pronotum. 82, punctation of pronotum. 83, punctation of elytra. 84, male sternum VIII. 85, phallus, side view. 86, internal sac. 87, tegmen, dorsal view. 88, spicular fork.

## 5. *Chaetomalachius kotschy* Schilsky Figs 80–88.

*Chaetomalachius Kotschy* SCHILSKY, 1896, Die Käfer Europa's 32:51.

Remarkable by broad head and slender pronotum being nearly smooth on side margins (Fig. 81). Base of pronotum not emarginate at sides, antennal segment 2 brightly orange.

♂. Elongate, strongly convex. Coloration black with light bluish-green lustre having plumbeous reflexes, pedicel brightly orange. Integument finely and densely punctate; stout setae on elytra sparse. Head with network microsculpture; antenna as shown (Fig. 80). Pronotum (Figs 81,82) shallowly and densely punctate on disc, intervals with network sculpture. Lateral pronotal areas finely wrinkled (Fig. 82). Elytral puncturation (Fig. 83) nearly as on pronotal disc (Fig. 82) but somewhat shallower. Pygidium and sternum VII nearly as in *C. dasytoides*; sternum VIII (Fig. 84) and phallus (Figs 85, 86) resemble those in the preceding species. Tegmen of a simple structure (Fig. 87), spicular fork nearly circular in shape (Fig. 88).

Measurements. Length/AL = 3.54; AL/PL = 1.24; PW/HW = 1.26; PW/PL = 1.26; EL/PL = 3.09; EW/PW = 1.32; EL/EW = 1.79; length = 4.18 mm; width = 1.14 mm.

Type: Holotype ♂ (NMW): "Kots. m 78"; "Kotschy det. Schilsky" [not Schilsky's MS!]; "*Chaetomalachius Kotschy* [sic!] n.sp. Schilsky" (Schilsky's MS).

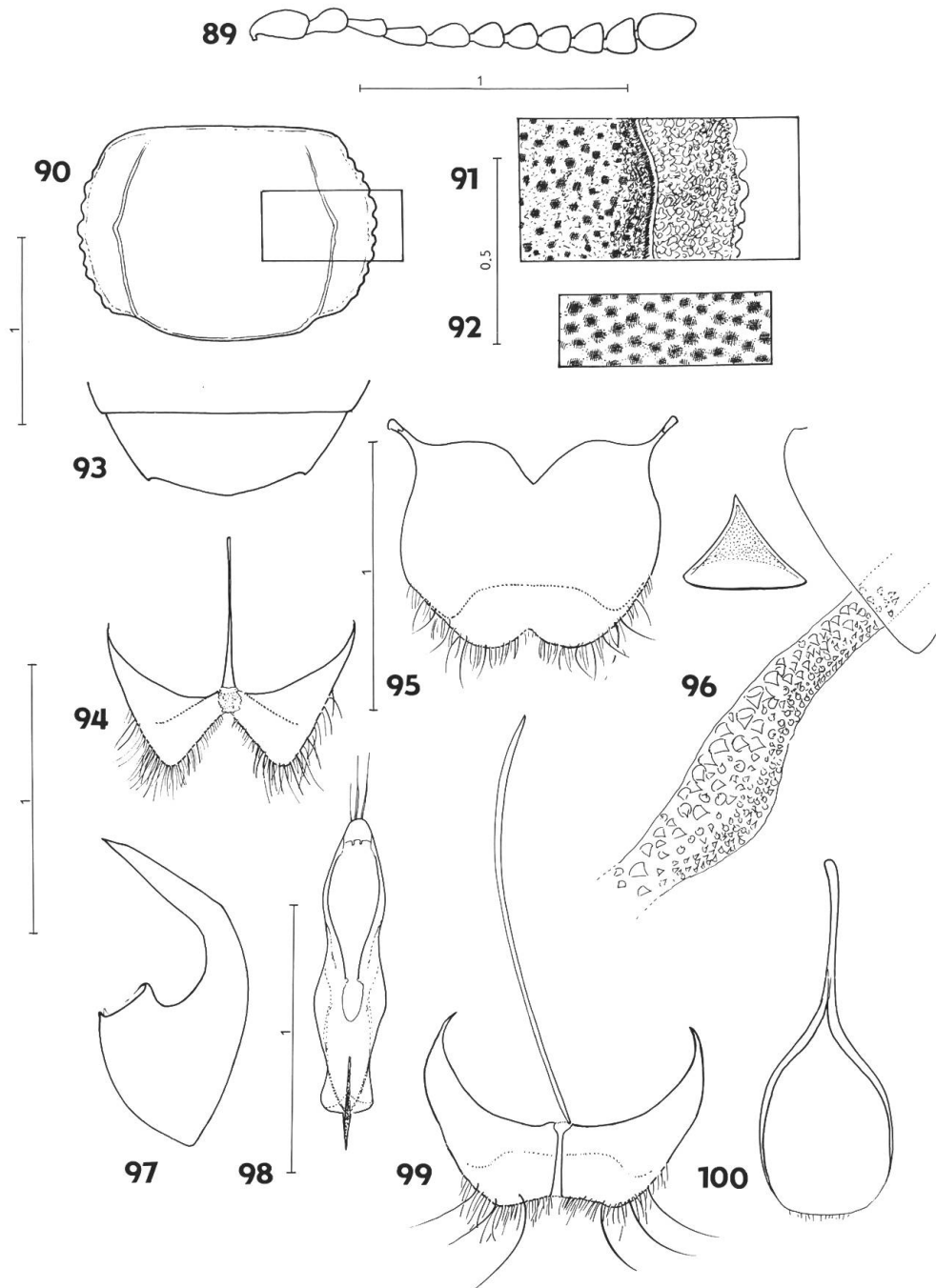
## 6. *Chaetomalachius cyanellus* (Kiesenwetter) Figs 89–100.

*Dasytiscus cyanellus* KIESENWETTER, 1863, Naturg. Ins. Dtschland 4:625. – BOURGEOIS, 1885, Ann. Soc. Ent. Fr. 6 (5): 256. – REITTER, 1885, Ent. Nachr. 11 (16): 242. *Chaetomalachius marginicollis* sensu SCHILSKY, 1896, Die Käfer Europa's 32: 53 (partim).

Differs from *C. marginicollis* by pronotal disc regularly punctate (Fig. 91) and side margins of pronotum coarsely and obtusely crenate (Fig. 90).

Coloration black with deep-blue lustre (exceptionally with greenish reflexes). Integument regularly punctate; fine pale pubescence<sup>1</sup> rather suberect, the black one erect, not very dense. Head densely and regularly punctate, punctures contiguous. Side pronotal margins coarsely and obtusely serrate (Fig. 90), disc regularly punctate (Fig. 91). Elytra (Fig. 92) more coarsely punctate than pronotum (Fig. 91).

<sup>1</sup>REITTER (1885: 242) refers erroneously: "...oben fein [merely?!] schwarz behaart".



Figs 89–100: *Chaetomalachius cyanellus* (Kiesw.) (89–194, 96–98, 100 neotype ♂): 89, right antenna. 90, outline of pronotum. 91, puncturation of pronotum. 92, puncturation of elytra. 93, male sternum VII. 94, male sternum VIII. 95, female pygidium. 96, internal sac. 97, phallus, side view. 98, tegmen, ventral view. 99, female sternum VIII. 100, spicular fork.

♂. Antenna as shown (Fig. 89). Pygidium resembling that in *C. punctatus*, sternum VII (Fig. 93) slightly emarginate on sides of apex. Sternum VIII (Fig. 94) and tegmen (Fig. 98) are shown. Spicular fork slender (Fig. 100). Phallus (Fig. 97) emarginate on the innerside of base. Internal sac with short spines (Fig. 96).

Measurements. Length/AL = 3.16–3.43; AL/PL = 1.15–1.42; PW/HW = 1.33–1.37; PW/PL = 1.26–1.42; EL/PL = 2.50–2.95; EW/PW = 1.23–1.30; EL/EW = 1.56–1.68; length = 4.18–4.73 mm; width = 1.86–1.91 mm.

♀. Widened posteriorly, pygidium and sternum VIII shown (Figs 95, 99).

Measurements. Length/AL = 3.57–4.00; AL/PL = 1.04–1.22; PW/HW = 1.40–1.50; PW/PL = 1.20–1.30; EL/PL = 2.68–2.98; EW/PW = 1.40–1.46; EL/EW = 1.48–1.59; length = 4.54–4.64 mm; width = 1.86–2.00 mm.

Material examined: 16♂, 16♀. Neotype ♂ (ZMB): “Malatia Mesopotam. Staudgr. 85” (white label, printed); “D. Heyden” (Schilsky’s MS); “*marginicollis* Rtrr.” (white label, Schilsky’s MS). Turkey: Akbes (7♂ and 6♀, ZMB; 1♂ and 1♀, TMB). Mardin, Taurus Mts., (2♂ and 3 ♀, NMB; 1♂ and 1♀, SNM; 1♂, KMB). Syria: “Syria” (1♀, NMB; 1♂, KMB). Antilibanon, Zabadani, 1200–1400 m, 15.VI.78, W. Heinz (1♂ and 2♀, KMB). Damascus env., 700 m, 16.IV.1978, W. Heinz (1♂, KMB). Lebanon: Chtaura env., V.1926, Heyrovský (1♀, KMB). Greece: “Graecia”, (1♀, TMB).

Distribution (Figs 296, 297): Turkey, Syria, Lebanon, Greece??

Remarks: The species was confused with *C. marginicollis* Reitt. As Kiesenwetter’s type-material is lost, I designated a neotype of this species. In Kiesenwetter’s brief description is given: .. “nigro pubescent, longius pilosus..”, and the pale, decumbent pubescence is omitted, nevertheless I consider my interpretation of this species to be correct.

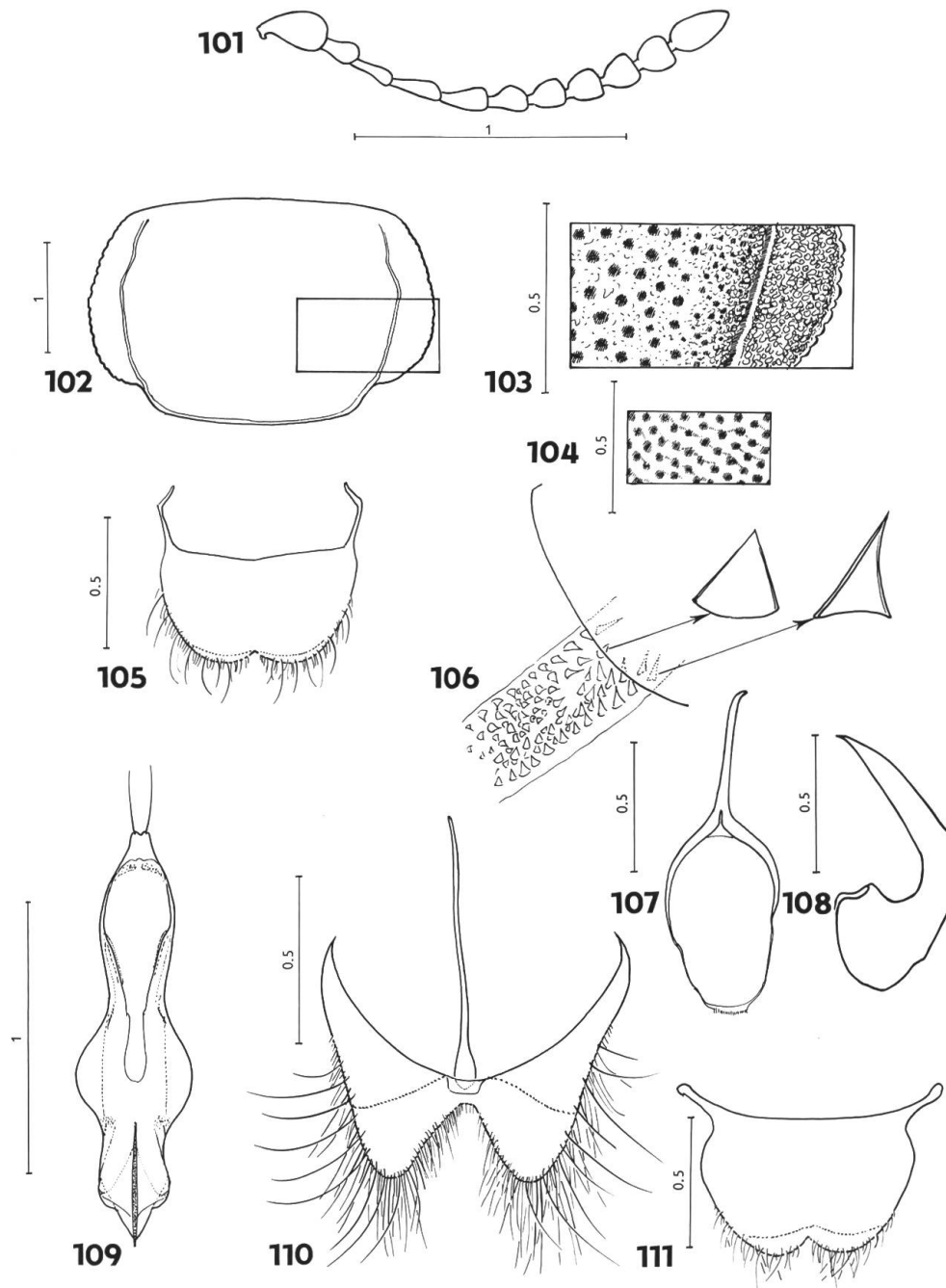
## 7. *Chaetomalachius marginicollis* (Reitter) Figs 101–111, 290.

*Dasytes marginicollis* REITTER, 1891; D.Ent.Z.:26.

*Chaetomalachius marginicollis* sensu SCHILSKY, 1896, Die Käfer Europa’s 32:53 [olim: *cyanellus* + *marginicollis*]. – REITTER, 1902; Wien. Ent.Z. 21:212.

Differs from the preceding species by more transverse pronotum (Fig. 102); terminalia different (Figs 105–111).

Shape, coloration, and integument as in *C. cyanellus*; antenna somewhat more slender at basal portion (Fig. 101). Pronotal disc (Fig. 103) finely punctate. Female holotype pronotum (Fig. 102) more transverse than in male. Elytra more finely punctate (Fig. 104) than in *C. cyanellus* (Fig. 92).



Figs 101–111: *Chaetomalachius marginicollis* (Reitter) (101, 102, 111 holotype ♀): 101, right antenna. 102, outline of pronotum. 103, puncturation of pronotum. 104, puncturation of elytra. 105, male pygidium. 106, internal sac. 107, spicular fork. 108, phallus, side view. 109, tegmen, ventral view. 110, male sternum VIII. 111, femal pygidium.

♂. Pronotum more slender and as a whole smaller than in female. Pygidium shown (Fig. 105), sternum VII nearly as in *C. cyanellus*, basal corners of sternum VIII more elongate (Fig. 110). Spicular fork (Fig. 107) similar to that in *C. cyanellus*. Tegmen widened near middle (Fig. 109). Phallus with somewhat smaller base (Fig. 108), internal sac is shown (Fig. 106).

Measurements. Length/AL = 3.33–3.59; AL/PL = 1.35–1.50; PW/HW = 1.33–1.45; PW/PL = 1.40–1.59; EL/PL = 3.19–3.45; EW/PW = 1.17–1.37; EL/EW = 1.63–1.76; length = 4.30–5.20 mm; width = 1.72–1.86 mm.

♀. Pronotum wider and larger (Fig. 102). Pygidium straight at base (Fig. 111), sternum VIII as in *C. cyanellus*. Ovipositor as shown (Fig. 290).

Measurements. Length/AL = 3.63–3.70; AL/PL = 1.11–1.14; PW/HW = 1.49–1.58; PW/PL = 1.39–1.41; EL/PL = 2.90–2.93; EW/PW = 1.23–1.25; EL/EW = 1.66–1.68; length = 5.48–5.70 mm; width = 2.01–2.36 mm.

Material examined: 7♂, 5♀. Holotype ♂ (TMB): "Caucasus Araxesthal Leder Reitter" (white label, printed).

"Turkestan, Reitter" (1♂, TMB). Armenia, Mesketski khrebet, Leder & Reitter (1♂, TMB). Azerbaidjan, Bezh-Barama, 13.V.1978, Okáli (1♂ and 2♀, SNM; 2♂, KMB); Idem, Kocourek (1♀, KMB; 1♀, Brit.Mus.,Nat.Hist.). Turcmenia, Firyuza, 15.V.1975, Pospíšil (1♂, KMB); Idem, 15.IV.1980, Kubáň (1♂, KMB).

Distribution (Fig. 297): Caucasus, Turcmenia (Kopet-Dagh).

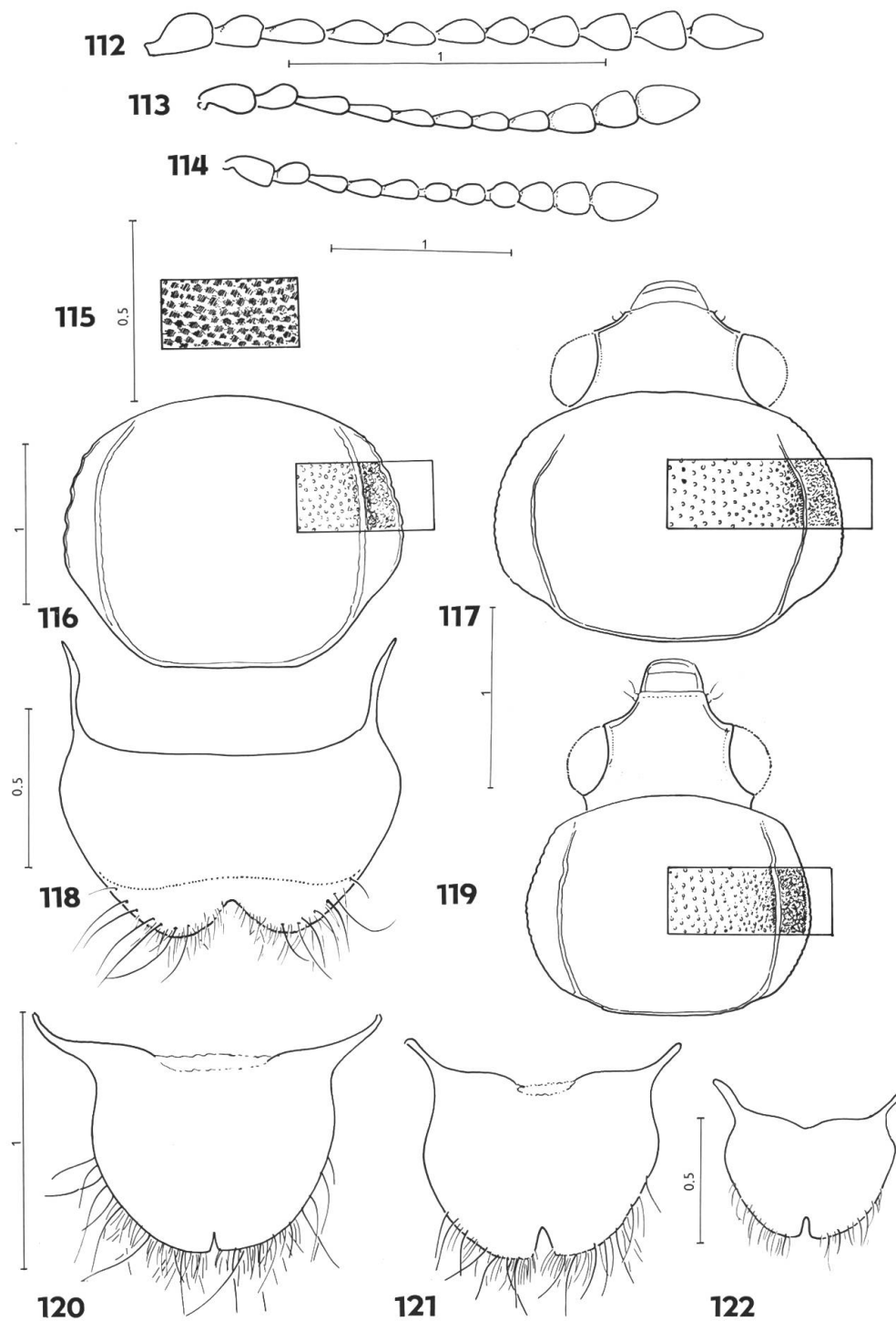
Remarks: Specimens from Kopet-Dagh are slightly different from caucasian ones in the shape of the pronotum, but the terminalia of the both formae are identical.

## 8. *Chaetomalachius aeneolus* n. sp.

Figs 112–131.

Differs from *C. dasytoides* by the pronotum being nearly transversely oval and regularly punctate on disc (Figs 116, 117, 119).

Coloration black with bluish-green lustre having plumbeous reflexes. Elytra exceptionally with bluish to brassy lustre, then body is bicolorous. Pedicel nearly always paler, mostly brownish. Integument regularly punctate. Basal pale pubescence very short, nearly decumbent. Head very densely punctate; antenna (Figs 112–114) with more or less elongate segments. Pronotum variable but always more or less transversely oval, disc densely and regularly punctate, punctures mostly with raised margins (Figs 116, 117, 119). Elytra finely, flattly and densely punctate (Fig. 115). Apex of elytra slightly tapered.



Figs 112–122: *Chaetomalachius aeneolus* n. sp.: 112, male right antenna. 113, 114, female right antenna. 115, puncturation of elytra. 116, pronotum. 117, 119, outline of female head and pronotum. 118, male pygidium. 120–122 female pygidium.

♂. Slender, elytral apex conspicuously tapered. Pygidium as shown (Fig. 118), sternum VII produced at apex (Fig. 128), VIII as shown (Fig. 124). Spicular fork shown (Fig. 126). Tegmen (Fig. 123) very slender. Phallus in side view (Fig. 125) with curved tip. Internal sac (Fig. 127) with spines nearly as in *C. dasytoides*.

Measurements. Length/AL = 3.18–3.57; AL/PL = 1.40–1.50; PW/HW = 1.26–1.38; PW/PL = 1.32–1.44; EL/PL = 3.27–3.50; EW/PW = 1.27–1.33; EL/EW = 1.80–1.89; length = 4.54–5.00 mm; width = 1.68–1.86 mm.

♀. More convex and widened posteriorly, elytral apex shortly produced, nearly angulate. Pygidium (Figs 120–122) notched at apex. Sternum VIII irregularly emarginate at base (Figs 129–131).

Measurements. Length/AL = 3.57–3.79; AL/PL = 1.20–1.40; PW/HW = 1.39–1.48; PW/PL = 1.31–1.60; EL/PL = 3.00–3.67; EW/PW = 1.23–1.42; EL/EW = 1.67–1.80; length = 4.54–5.77 mm; width = 2.04–2.46 mm.

Types: Holotype ♂ (NMB), Allotype ♀ (NMB), 11 ♂ and 1 ♀, KMB; 1 ♂, ZMB; 1 ♂, DEI; 2 ♂, Brit. Mus. Nat. Hist.): “Kopet-Dagh, Firyuza, 15. IV. 80, V. Kubáň; Idem, 13. V. 1984, B. Malec (1 ♂ and 9 ♀, KMB); Idem, 22. IV. 81, Brodský (2 ♀, KMB); Idem, Hladil (1 ♀, KMB; 1 ♀, coll. R. Constantin). Mts Karateghin, Baldschuan, 924 m, 1898, Hauser (1 ♂, KMB). Saramsakli, Hauser (1 ♀, KMB; 1 ♂, NMB). Annau, 21. IV. 1981, Hladil (1 ♀, KMB). N Afghanistan, prov. Herat, Bala Murghab, 470 m, 20. III.–1. IV. 1964, Jakeš (1 ♀, MMB; 1 ♂ and 1 ♀, KMB); Idem, Buzba, 800 m (1 ♀, MMB).

Distribution (Fig. 297): Kopet-Dagh (Turkmenian as well as Iranian), Tadjikistan, Afghanistan (prov. Herat).

## 9. *Chaetomalachius dasytoides* Kraatz

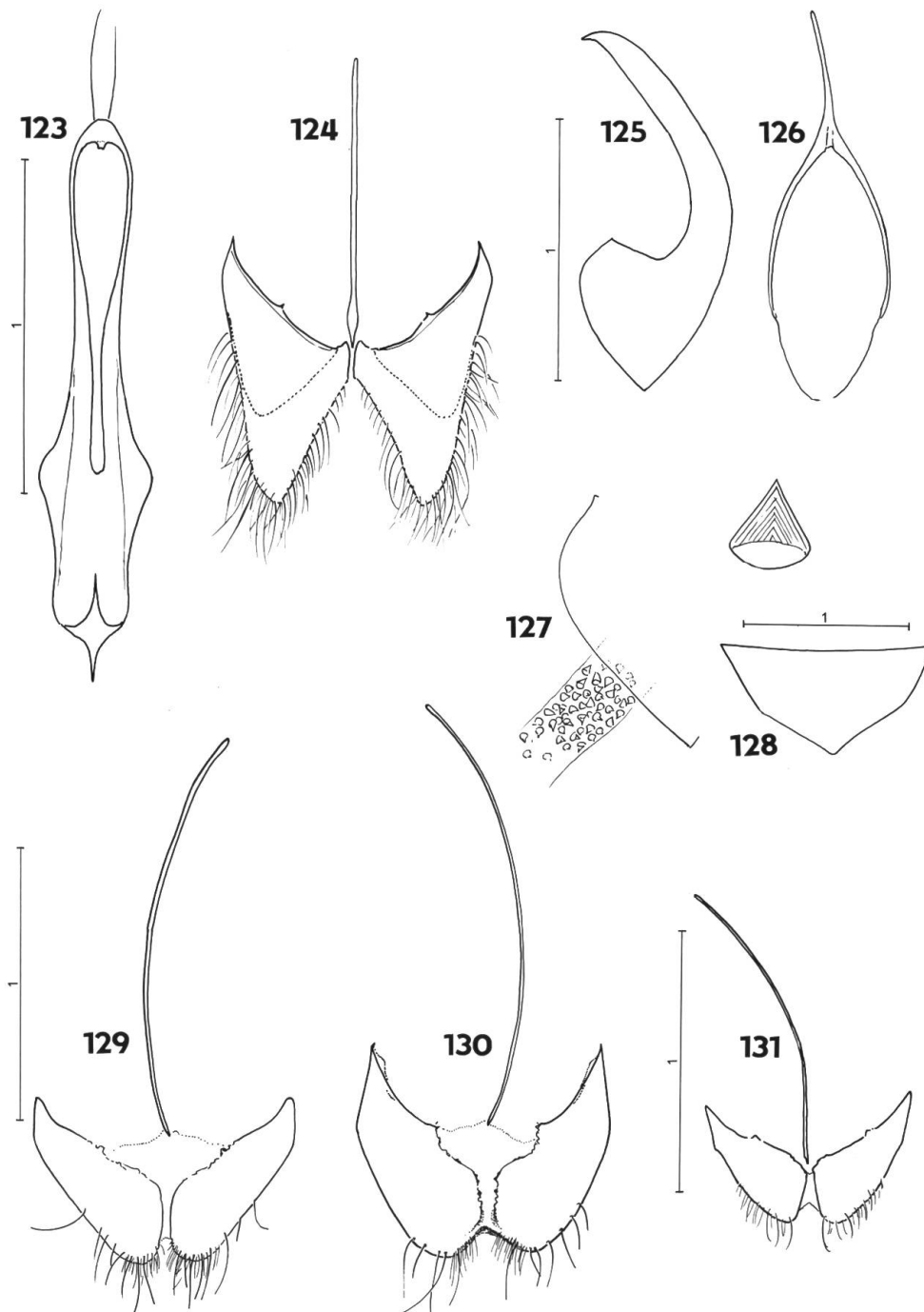
Figs 1–35, 289.

*Chaetomalachius dasytoides* KRAATZ, 1882, D. ENT. Z 26: 96 [nec KHNZORIAN, 1965: 84, fig. 6 = *aeneus* SCHILSKY]. – SCHILSKY, 1896, Die Käfer Europa's 32: 49.

*Dasytiscus transcaspicus* BOURGEOIS, 1885, Ann. Soc. Ent. Fr. 6 (5): 256, t. 5., fig. 1.

Remarkable by the shape of pronotum (Fig. 22) which has more or less straight sides, slightly conically narrowed forwards; apex nearly straight, disc with distinctive double puncturation (Fig. 23).

Elongate, subparallel. Coloration black with light bluish-green or bluish lustre with plumbeous reflexes. Basal pale decumbent pubescence relatively dense. Head very densely and finely, regularly punctate, nearly



Figs 123–131: *Chaetomalachius aeneolus* n.sp.: (123–128 holotype ♂): 123, tegmen, dorsal view. 124, male sternum VIII. 125, phallus, side view. 126, spicular fork. 127, internal sac. 128, male sternum VIII. 129–131, female sternum VIII.

dull; antennal segments 6 and 7 slightly transverse (Figs 6, 7). Pronotal disc very densely and finely punctate, punctures mostly of two sizes (Fig. 23). Basal pale pubescence on elytra clearly denser than that on head and pronotum; elytral puncturation fine (Fig. 24). Elytral apex mostly distinctively angulate, produced. For detailed morphology of this species see Figs 2–35.

♂. Pygidium (Fig. 51) with elongate basal corners. Sternum VII (Fig. 31) with apical depression, produced in middle. Sternum VIII with widened medial process (Fig. 26). Spicular fork (Fig. 19) with pointed fork proper. Phallus (Fig. 28) pointed at apex. Internal sac (Fig. 25) with horn-shaped spines.

Measurements. Length/AL = 3.78–4.44; AL/PL = 1.04–1.14; PW/HW = 1.36–1.38; PW/PL = 1.20–1.30; EL/PL = 2.70–3.07; EW/PW = 1.12–1.38; EL/EW = 1.62–2.16; length = 4.23–5.68 mm; width = 1.59–2.23 mm.

♀. Widened posteriorly, femora more slender. Pygidium (Fig. 52) notched at apex. Sternum VII (Fig. 32) with pointed apex. Sternum VIII (Fig. 35) interrupted in middle. Ovipositor shown (Fig. 289).

Measurements. Length/AL = 3.85–4.52; AL/PL = 1.03–1.09; PW/HW = 1.41–1.54; PW/PL = 1.37–1.48; EL/PL = 3.08–3.33; EW/PW = 1.33–1.42; EL/EW = 1.66–1.76; length = 4.72–5.95 mm; width = 1.91–2.32 mm.

Distribution (Fig. 297). One of the most abundant Central-Asian dasytine species, most likely occurring also in Northern Iran.

Material examined about 1000 specimens: Lectotype ♂ (DEI): “Margelan” (yellow label, Kraatz’s MS); “*Chaetomalachius dasytoides* Krtz. Margellan 1882” (yellow label, Kraatz’s MS); “coll. Kraatz” (white label, printed). 1 ♂ and 1 ♀ paralectotypes with data as lectotype.

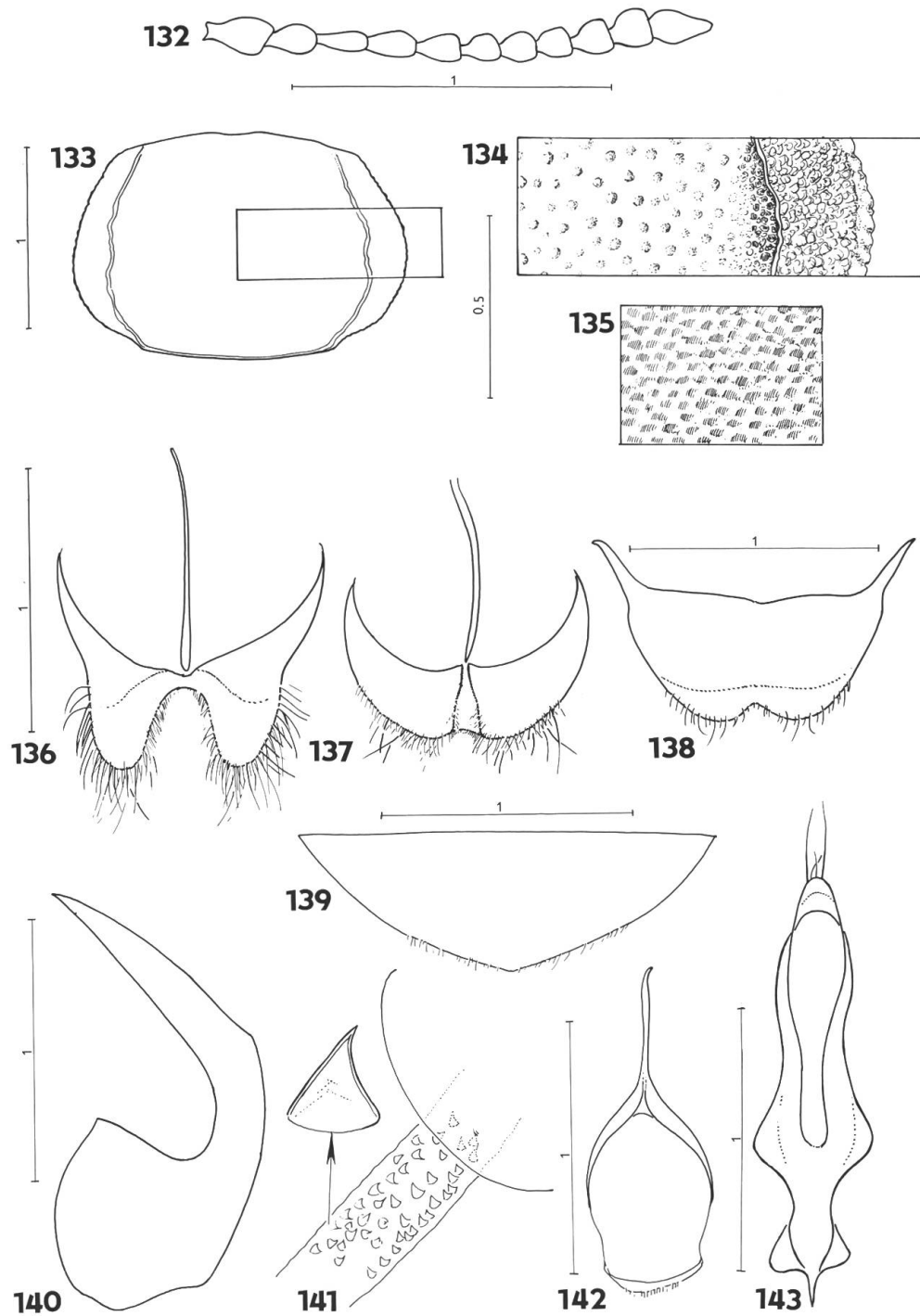
Uzbekistan. Chimgan and Ak-Tash, abundant material from various collectors (KMB). Samarkand, 21.4.72, Horák (KMB); Idem, O. Herz (TMB). Tashkent, Reitter, Hauser (ZMB, TMB). Kyndyr (DEI, ZMB). Syr-Darya (DEI). Kazakhstan. (KMB): Akkol, 5.V.78, Hladil, Strejček Kuyuk-pass, V.81, Hladil. Uyuk, V.81., Jelínek. Assa, V.81, Hladil. Kirghizia (KMB): Kadamzhai, 9.V.77, Bílý. Khamzabad, 26.IV.72, Horák.

Turcmenia (KMB): Firjuza, 27.IV.77, Hladil; Idem, 15.IV.80, Strejček; Tadjikistan, Yavroz, V.1977, Bílý. Ramit, 26.IV.81, Olexa. Pendjikent, 20.IV.79, Kubáň. Leninabad, Reitter (ZMB).

#### 10. *Chaetomalachius wittmeri* n. sp.

Figs 132–143.

Closely related to *C. aeneolus* from which it differs in the punctures on pronotal disc having no raised margins (Fig. 134) and antennal seg-



Figs 132–143: *Chaetomalachus wittmeri* n. sp.: (132–136, 138–143 holotype ♂): 132, left antenna. 133, outline of pronotum. 134, puncturation of pronotum. 135, puncturation of elytra. 136, male sternum VIII. 137, female sternum VIII. 138, male pygidium. 139, male sternum VII. 140, phallus, side view, 141, internal sac. 142, spicular fork. 143, tegmen, ventral view.

ments more transverse (Fig. 151). Reliably distinguishable only by structure of terminalia (Figs 136–143).

Coloration black, with light green-bluish lustre.

Shape and integument nearly as in two preceding species. Antennal segments more transverse (Fig. 132), pedicel often brownish, reddish, exceptionally nearly orange. Pronotum arcuate at sides (Fig. 133), disc finely punctate, punctures without raised margins (Fig. 134). Elytra finely punctate, with inconspicuous transverse wrinkles (Fig. 135).

♂. Antennal segments less transverse (Fig. 151). Pygidium strongly transverse, basal corners acuminate (Fig. 138). Sternum VII (Fig. 139), VIII (Fig. 136), and spicular fork (Fig. 142) shown. Tegmen widened at basal third (Fig. 143). Phallus in side view (Fig. 140) with not curved tip. Internal sac with explicitly spine-shaped spines (Fig. 141).

Measurements. Length/AL = 3.65–3.95, AL/PL = 1.11–1.33, PW/HW = 1.40–1.47, PW/PL = 1.29–1.40, EL/PL = 3.00–3.33, EW/PW = 1.30–1.33, EL/EW = 1.70–1.78, length = 5.69–6.07 mm, width = 2.15–2.30 mm.

♀. Antennal segments somewhat more transverse. Pygidium similar to that in two preceding species. Sternum VII (Fig. 137) similar to that in *C. dasytoides* (Fig. 35).

Measurements. Length/AL = 4.15–4.41, AL/PL = 1.04–1.12, PW/HW = 1.46–1.53, PW/PL = 1.33–1.38, EL/PL = 2.93–3.11, EW/PW = 1.37–1.40, EL/EW = 1.58–1.62; length = 5.40–6.15 mm, width = 2.00–2.46 mm.

Types: (1♂ and 10♀): Holotype ♂ (NMB): “Gr. Balachan, Dschebell, F. Hauser 1898”. Allotype ♀ and 1♂ (MNB), 2♂ and 3♀ (DEI), 1♀ (KMB), with data as Holotype. “Tschitschantan Nufswald, F. Hauser 1898”, 1♂ (KMB). Firjuza, 22.IV.81, Hladil (1♀, KMB); Idem, 27.IV.77, Pospíšil (1♀, KMB). Iran: Ala-Dagh, Budshnurd, 1033 m, VI.1902, F. Hauser (1♀, KMB). Lotfabad (2♀, KMB).

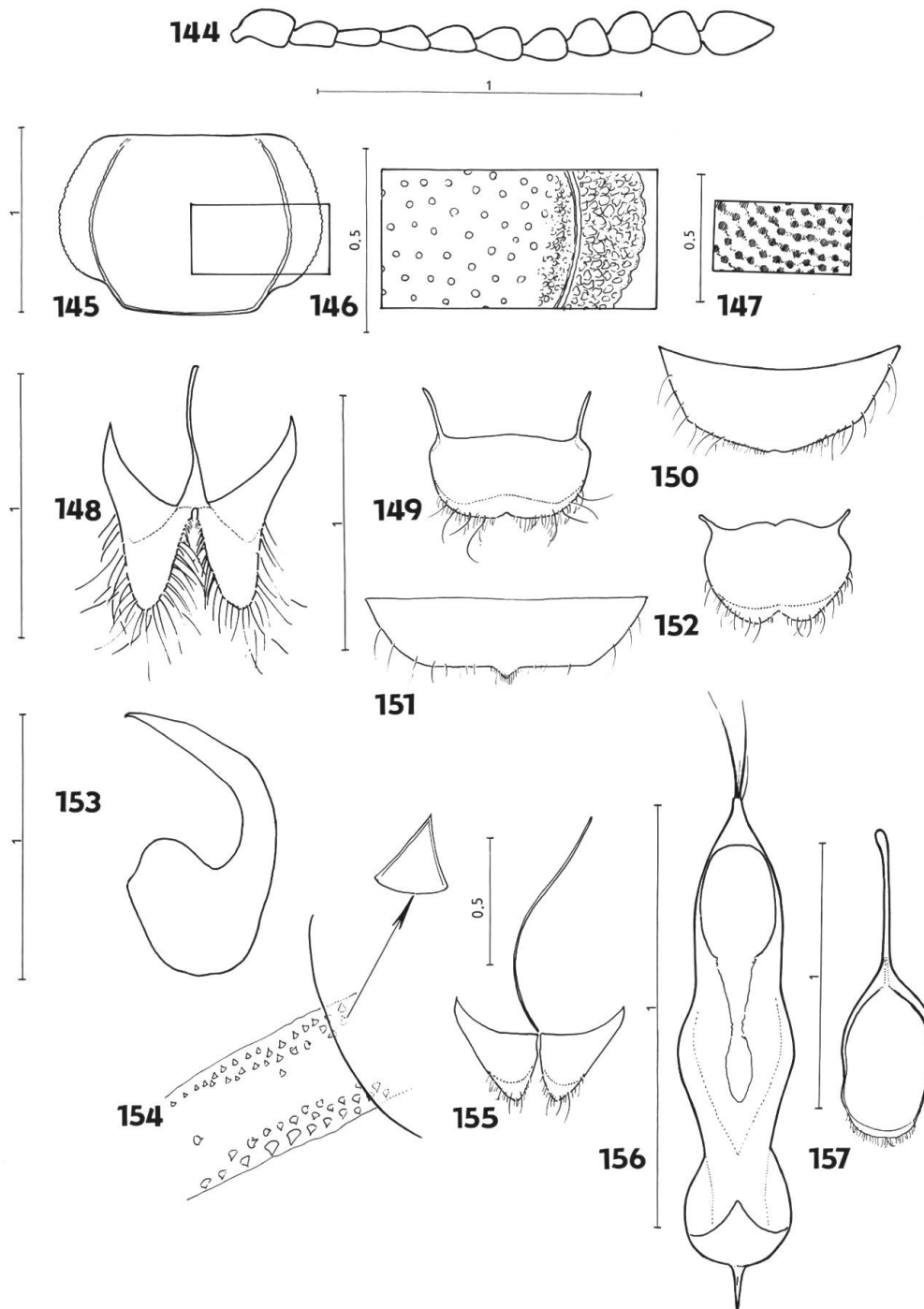
Distribution (Fig. 297): Northern Iran, Turcmenia, Kirghizia.

#### 11. *Chaetomalachius klapperichi* Khnzorian Figs 144–157.

*Chaetomalachius klapperichi* KHNZORIAN, 1965, L'Entomologiste 21 (4–5): 80, Figs 2a–c.

Externally distinguishable by the combination of coarsely punctate elytra (Fig. 147) and green-plumbeous lustre.

Slender (female much more robust); coloration black, lustre greenish with plumbeous tinge. Integument regularly punctate, basal pale



Figs 144–157: *Chaetomalachius klapperichi* Khnzorian (144–150, 154, 156, 157 holotype ♂, 151, 152, 155 paratype ♀): 144, right antenna. 145, outline of pronotum. 146, puncturation of pronotum. 147, puncturation of elytra. 148, male sternum VIII. 149, male pygidium. 150, male sternum VII. 151, female sternum VII. 152, female pygidium. 153, phallus, side view. 154, internal sac. 155, female sternum VIII. 156, tegmen, dorsal view. 157, spicular fork. (Scale = 1 mm).

pubescence relatively sparse, subdecumbent. Head very densely punctate, antenna shown (Fig. 144). Pronotal disc (Fig. 146) finely, sparsely, and regularly punctate, its pale pubescence very sparse, relatively long, completely decumbent. Elytra coarsely punctate (Fig. 147), punctures partly confluent into transverse wrinkles, pale pubescence sparse (sparser than in *C. dasytoides*), slightly decumbent.

♂. More slender, extremities stouter, elytral apex slightly produced. Pygidium (Fig. 149) transverse with digitate basal corners. Sternum VII (Fig. 50) minutely emarginate at apex, VIII deeply emarginate (Fig. 148) with medial process widened at base. Spicular fork (Fig. 157) with elongate fork proper. Tegmen (Fig. 156) widened near middle, apex with several setae. Phallus (Fig. 153) with subovate base. Internal sac with conical spines (Fig. 154).

Measurements. Length/AL = 3.80–4.01, AL/PL = 1.13–1.15, PW/HW = 1.24–1.37, PW/PL = 1.18–1.21, EL/PL = 2.94–2.95, EW/PW = 1.36–1.38, EL/EW = 1.70–1.78; length = 4.09–4.40 mm, width = 1.60–1.68 mm.

♀. More robust, extremities more slender, elytral apices jointly rounded. Pygidium as shown (Fig. 152). Sternum VII pointed at apex (Fig. 152), VIII (Fig. 155) interrupted in middle.

Measurements. Length/AL = 3.70–3.71, AL/PL = 1.17–1.21, PW/HW = 1.40–1.57, PW/PL = 1.30–1.46, EL/PL = 2.70–3.00, EW/PW = 1.36–1.39, EL/EW = 1.50–1.66; length = 4.04–4.10 mm, width = 1.63–1.70 mm.

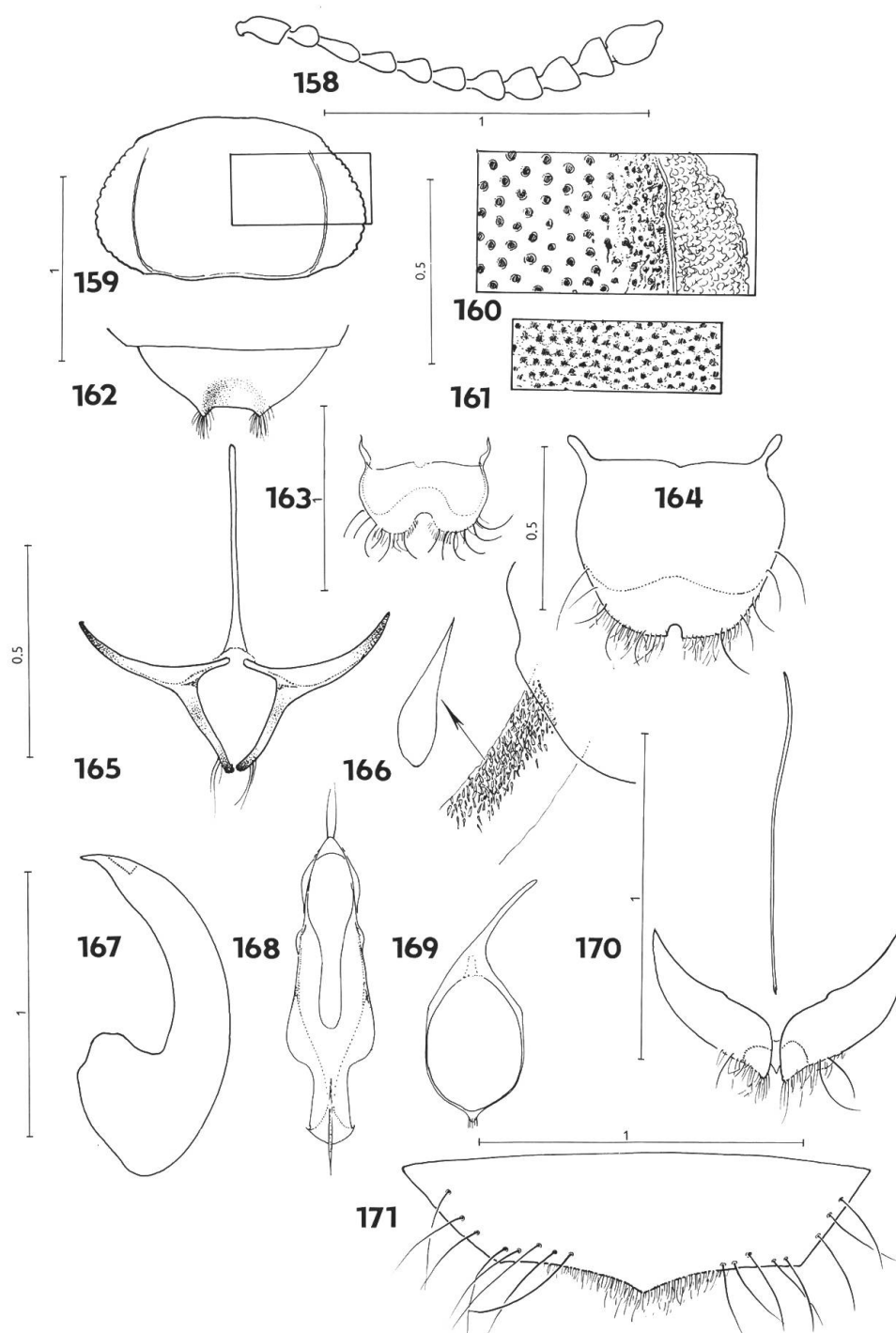
Types (10♂ and 5♀, NMB): Holotype ♂: "J. Klapperich, Bashgultal, 1500 m, Kamu, Nuristan, 26.IV.53 Afgh." (white label, printed); "typus" (white label, Khnzorian's MS); "*Chaetomalachius klapperichi* Khnz." (white label with a black margin, Khnzorian's MS), Khnzorian det." (printed). 3♂ with data as Holotype. "J. Klapperich, Kamdesh 2000 m, Nuristan, 27.IV.53 Afgh." (6♂, 5♀).

Remarks. Khnzorian (1965) gives 19 type-specimens, two of them are deposited in the Zoological Institute of the Academy of Sciences of Armenian SSR (Erivan), another in the Zoological Institute of U.S.S.R., Leningrad.

## 12. *Chaetomalachius bactrianus* Khnzorian Figs 158–171.

*Chaetomalachius bactrianus* KHNZORIAN, 1965, L'Entomologiste 21 (4–5): 83.

Easily recognizable by the structure of terminalia in both sexes (Figs 162–171), being without analogy among the examined species. Pro-



Figs 158–171: *Chaetomalachius bactrianus* Khnzorian (158–163, 165–169 male, 164, 170, 171 female): 158, right antenna. 159, outline of pronotum. 160, puncturation of pronotum. 161, puncturation of elytra. 162, male sternum VII. 163, male pygidium. 164, female pygidium. 165, male sternum VIII. 166, internal sac. 167, phallus, side view. 168, tegmen, ventral view. 169, spicular fork. 170, female sternum VIII. 171, female sternum VII. (Scale = 1 mm)

notum strongly transversely ovate, minutely crenate on side margins (Figs 159, 160).

Integument strongly punctate, pale pubescence extraordinarily fine, completely decumbent. Coloration black, with light-green to bluish lustre, exceptionally with plumbeous reflexes, extremities often brownish. Head very densely punctate, antennal segments conical, not very transverse (Fig. 158). Pronotum strongly transversely ovate (Fig. 159) with sparse obtuse denticles on side margins, disc regularly punctate, punctures with raised margins (Fig. 160). Elytra densely, shallowly, and finely punctate, punctures partly confluent into transverse wrinkles (Fig. 161).

♂. More slender, pronotum less transverse. Pygidium of a very special outline (Fig. 163). Sternum VII (Fig. 162) excavate and slightly ermarginate at apex, with clusters of hairs at each side. Sternum VIII (Fig. 165) transformed into paired, completely isolated, digitate formations. Spicular fork (Fig. 169) at apex with projection bearing several setae. Tegmen conical, its base slender and parallel (Fig. 168). Phallus with rounded base, regularly curved, pointed at apex (Fig. 167). Internal sac with guttiform spines (Fig. 166).

Measurements. Length/AL = 3.60–3.65, AL/PL = 1.31–1.37, PW/HW = 1.40–1.47, PW/PL = 1.47–1.48, EL/PL = 3.20–3.36, EW/PW = 1.29–1.32, EL/EW = 1.69–1.73; length = 4.09–4.40 mm, width = 1.60–1.68 mm.

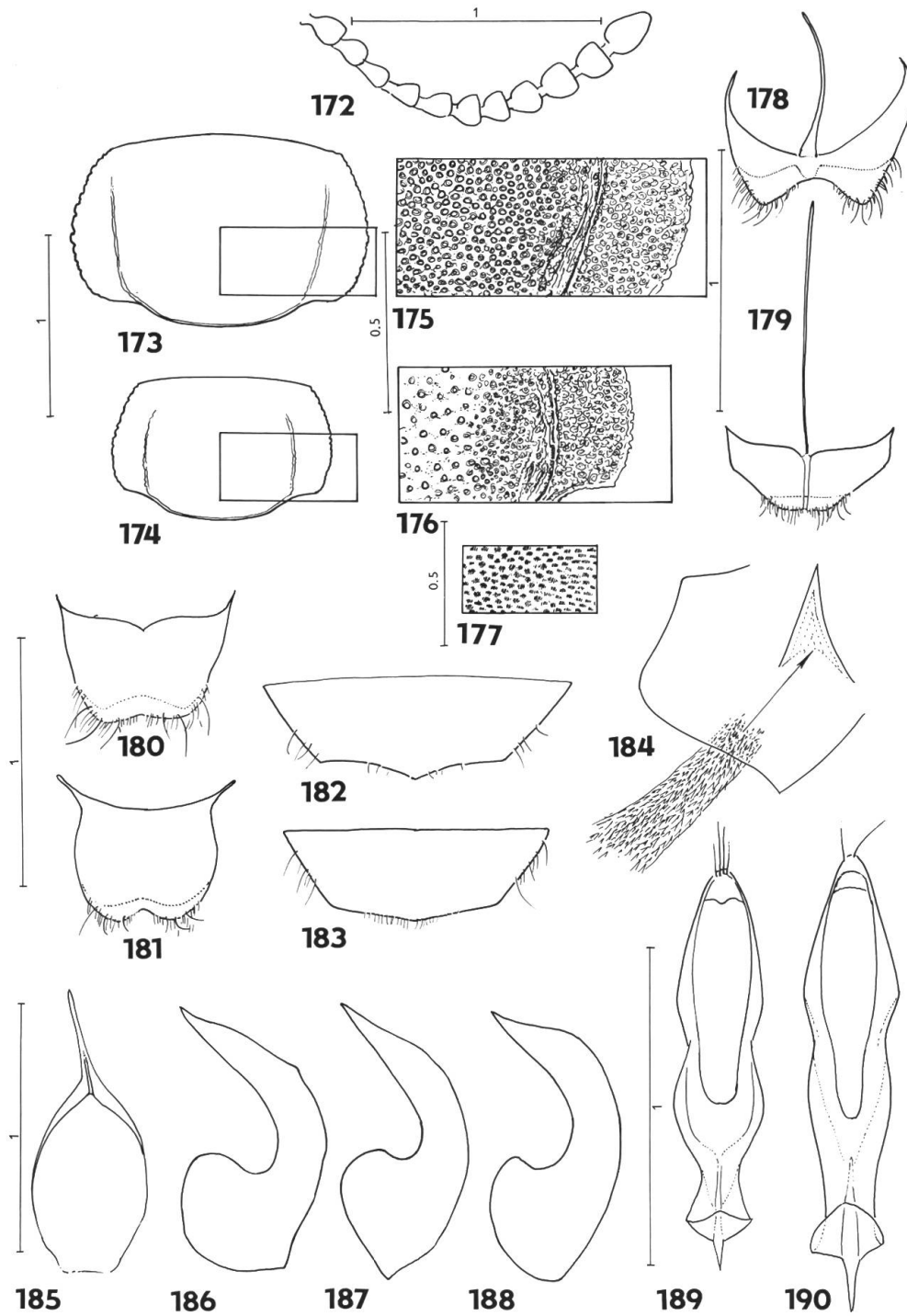
♀. Wider, pronotum more transverse. Pygidium with digitate basal corners (Fig. 164). Sternum VII produced at apex, with distinctive dual pubescence (Fig. 171), VIII divided into two (Fig. 170).

Measurements. Length/AL = 3.66–3.88, AL/PL = 1.31–1.36, PW/HW = 1.55–1.58, PW/PL = 1.42–1.56, EL/PL = 3.24–3.44, EW/PW = 1.32–1.39, EL/EW = 1.66–2.21; length = 4.00–4.40 mm, width = 1.77–1.86 mm.

Type material of *C. bactrianus* comprises 6 specimens, they are deposited at the Institute of the Academy of Sciences of Armenian SSR (Erivan) (Khnzorian, 1965): Holotype ♂: Gandzhina, 3.IV.64, Khnzorian. 4 paratypes same data as holotype: Shaartuz, Khnzorian (1♂). Material examined: 26 ex. Karakul (2♂ and 2♀, NMB; 1♀, KMB).

Material examined: Babatak khrebet, 18.IV.78, Bílý (1♂, KMB); Idem, Víša (1♂, Brit. Mus., Nat. Hist.). Tursunzade, 916 m, 1898, F. Hauser (1♂ and 1♀, NMB). 90 km NE Andizhan, 1898, F. Hauser (2♂ and 2♀, KMB 6 ex.; DEÍ 6 ex., NMB). – “Ost Buchara” (1♂, KMB).

Distribution: Tadjikistan, Uzbekistan, Kirghizia (Fig. 297).



Figs 172–190: *Chaetomalachius forticornis* Schilsky (172–178, 180, 183–190 male, 179, 181, 182 female): 172, right antenna. 173, 174, outline of pronotum. 175, 176, puncturation of pronotum. 177, puncturation of elytra. 178, male sternum VIII. 179, female sternum VIII. 180, male pygidium. 181, female pygidium. 182, female sternum VIII. 183, male sternum VIII. 184, internal sac. 185, spicular fork. 186–188, phallus, side view. 189, 190, tegmen, dorsal view. (Scale = 1 mm).

### 13. *Chaetomalachius forticornis* Schilsky Figs 172–190.

*Chaetomalachius forticornis* SCHILSKY, 1896, Die Käfer Europa's 32: 50.

Remarkable by transverse antennal segments 6–10 (Fig. 172), transverse big head, and pronotum (Figs 173–174) having extensive lateral areas, disc with punctures having raised margins (Figs 175, 176).

Coloration black with bluish, greenish, brassy, or yellowish-plumbeous lustre. Integument very densely and finely punctate, basal pubescence observable on elytra only, it is very short and adherent. Head broad, very densely and irregularly punctate, interocular depressions distinct, antenna (Fig. 172) with segments 6–10 transverse. Pronotum variable in shape (Figs 173–174), always with extensive lateral areas and densely punctate on disc, punctures variably arranged (Figs 175–176), always with raised margins, pale pubescence imperceptible. Elytra shallowly and densely punctate (Fig. 177), punctures partly confluent into transverse wrinkles.

♂. Head broad, scarcely more slender than pronotum which is nearly straight at apex. Pygidium slightly conical (Fig. 180). Sternum VII (Fig. 183) nearly straight at apex, VIII weakly emarginate, medial process widened at base (Fig. 178). Spicular fork as shown (Fig. 185). Tegmen variable in shape (Figs 189, 190). Phallus short, robust, variable (Figs 186–188). Internal sac with slender spines (Fig. 184).

Measurements. Length/AL = 3.15–3.60, AL/PL = 1.25–1.46, PW/PL = 1.33–1.45, EL/PL = 2.90–3.47, EW/PW = 1.17–1.31, EL/EW = 1.69–1.78, length = 3.45–4.91 mm, width = 1.23–1.83 mm.

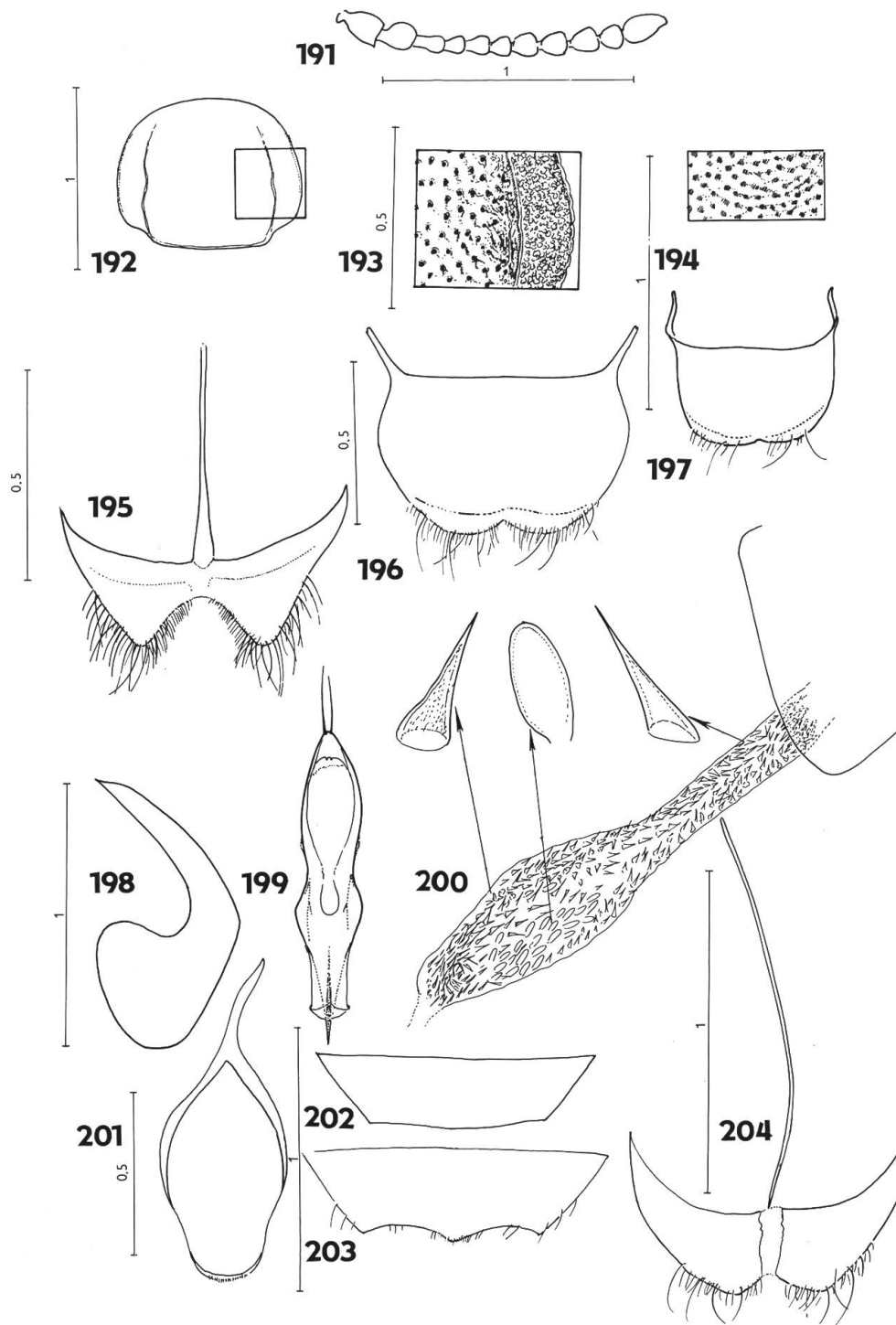
♀. Head narrower. Pygidium as shown (Fig. 181), sternum VII shown (Fig. 182), VIII divided in middle (Fig. 179).

Measurements. Length/AL = 4.00–4.34; AL/PL = 1.04–1.25; PW/HW = 1.37–1.50; PW/PL = 1.30–1.50; EL/PL = 3.09–3.35; EW/PW = 1.32–1.42; EL/EW = 1.65–1.75; length = 4.09–4.50 mm; width = 1.23–1.82 mm.

Distribution (Fig. 297): Kirghizia, Kazakhstan, Uzbekistan

Types: Lectotype, ♂ (ZMB): “Alai, Turkest. Staudingr.” (white label, printed); “D. Heyden” (white label, Schilsky's MS); “Typ!” (white label, Schilsky's MS); “*forticornis* \*Schils.” (white label with a black margin, Schilsky's MS). Paralectotype, ♀ (ZMB): “Turkest. Staudgr.”

Material examined: “Buchara, Schneider” (1 ♀, ZMB). Djambul (1 ♀, ZMB). Ketmen-Tyube, Hauser (1 ♂, KMB; 2 ♂, NBM). Fergana (1 ♂, KMB; 2 ♂ and 1 ♀, NMB). Tokmak, Hauser (1 ♂; NMB). Kadamzhai, 9.V.77, Strejček (1 ♂, KMB); Idem, Bílý (2 ♂, KMB); Idem, 5.V.75, Malý (2 ♂ and 2 ♀, KMB; 1 ♂, Brit. Mus., Nat. Hist.).



Figs 191–204: *Chaetomalachius hauseri* (Schilsky) (191–195, 197–202 lectotype ♂, 196, 203, 204, paralectotype ♀): 191, right antenna. 192, pronotum, outline. 193, punctation of pronotum. 194, punctation of elytra. 195, male sternum VIII. 196, female pygidium. 197, male pygidium. 198, phallus, side view. 199, tegmen, ventral view. 200, internal sac. 201, spicular fork. 202, male sternum VII. 203, female sternum VII. 204, female sternum VIII. (Scale = 1 mm).

Khamzabad, 8.V.77, Pospíšil (1 ♂, KMB); Idem, Strejček (1 ♀, KMB). Alma-Ata, (1 ♂, NMB). Iskandar (1 ♀, KMB). Chimgan, 6.V.78, Bílý (1 ♀, KMB). "Turkestan" (1 ♀, KMB; 1 ♂, NMB).

14. *Chaetomalachius hauseri* (Schilsky) Figs 191–204, 292.

*Dasytes Hauseri* SCHILSKY, 1894, Die Käfer Europa's 30: 31.

*Chaetomalachius Hauseri*: SCHILSKY, 1896, Die Käfer Europa's 32.

Differs from the preceding species by intensive blue (plum or azur) lustre and by pronotum having lateral areas less extensive (Fig. 192).

Integument very finely and densely punctate, basal pubescence nearly as in *C. forticornis*. Coloration black, intensively blue (lustre plum, azur, or violaceous, very rarely with greenish reflexes). Head nearly as in *C. forticornis*, antenna (Fig. 191) with variable segments which may be similar to those in *C. forticornis* or they are nearly quadrate. Pronotum scarcely variable in outline, lateral areas always less extensive (Fig. 192); puncturation of pronotal disc shown (Fig. 193) or it is much denser, similar to that as figured on Fig. 175. Elytra punctate as on Fig. 194, a tendency to form transverse wrinkles is weaker than in the preceding species..

♂. More slender, elytra posteriorly less convex. Pygidium (Fig. 197) similar to that in preceding species, likewise sterna VII (Fig. 202) and VIII (Fig. 195). Spicular fork shown (Fig. 201). Tegment (Fig. 199) slightly widened at posterior third. Phallus (Fig. 198) somewhat more slender. Internal sac (Fig. 200) with several kinds of spines.

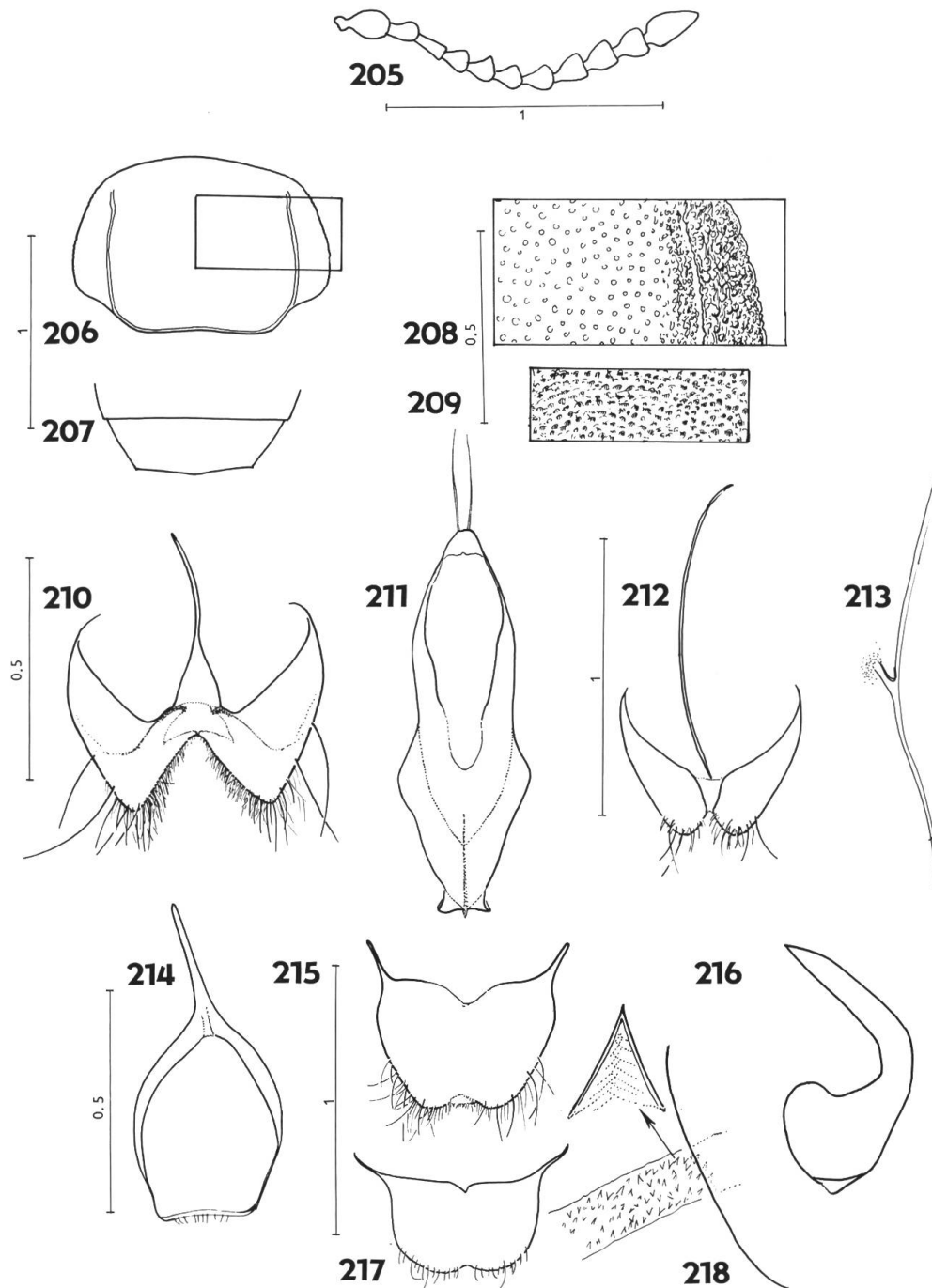
Measurements. Length/AL = 3.12–3.31; AL/PL = 1.39–1.50; PW/HW = 1.22–1.23; PW/PL = 1.37–1.40; EL/PL = 3.00–3.12; EW/PW = 1.27–1.33; EL/EW = 1.75–1.78; length = 3.41 mm, width = 1.27–1.64 mm.

♀. More widened posteriorly. Pygidium (Fig. 196) similar to that in *C. forticornis*. Sterna VII (Fig. 203) and VIII as in *C. forticornis*. Ovipositor shown (Fig. 292).

Measurements. Length/AL = 3.40–3.73; AL/PL = 1.30–1.38; PW/HW = 1.32–1.38; PW/PL = 1.45–1.95; EL/PL = 3.17–3.25; EW/PW = 1.38–1.40; length = 3.86–4.41 mm, width = 1.59–1.82 mm.

Distribution (Fig. 297): Uzbekistan, Kazakhstan, Tadjikistan.

Types: Lectotype ♂ (ZMB): "Taschkent Heyden" (white label, Schilsky's MS); "*Hauseri* \* Schils" (white label with a black margin, Schilsky's MS). Paralectotype ♀ (ZMB) with data as Lectotype. 2 paralectotypes ♂ (ZMB): "Bucharra, Schneider" and "Taschkent, Hauser".



Figs 80–88: *Chaetomalachius kotschy* Schilsky (holotype ♂): 80, right antenna. 81, outline of pronotum. 82, punctuation of pronotum. 83, punctuation of elytra. 84, male sternum VIII. 85, phallus, side view. 86, internal sac. 87, tegmen, dorsal view. 88, spicular fork.

Material examined: Kara-tepe, 25.IV.78, Strejček (2 ♂, KMB). Aman-Kutan, 2.V.77, Strejček (1 Strejček ♀, KMB); Idem, 23.IV.74, Dvořák (1 ♀, SNM). "Buchará" (1 ♂, TMB). Tashkent (1 ♂ and 1 ♀, TMB). "Tschitschantan", 1898, Hauser (1♂, NMB). Akkol, 8.V.1979, Hladil (1 ♂, KMB). Golodnaya step (1 ♂, TMB). Chimagart (3 ♀, TMB). Garavuti, 20.IV.78, Strejček (1 ♂, KMB). Pendzhikent, 23.IV.79, Kubáň (6 ♂ and 8 ♀, KMB); Idem, Víša (1 ♀, KMB).

15. **Chaetomalachius ruficornis** Schilsky Figs 205–218.

*Chaetomalachius ruficornis* SCHILSKY, 1896, Die Käfer Europa's 32:52.

Remarkable by pale extremities and whitish elytral pubescence. Elongate, parallel, strongly convex. Coloration black, with intensive brassy to brassy-green lustre, antenna from segment 2, tibiae and tarsi reddish to reddish-brown, terminal antennal segments and apices of pretarsi slightly darkened or black. Integument very finely and densely punctate (intervals between punctures smooth), basal pubescence light, the reclinate one dark on pronotum and pale on elytra. Head finely and sparsely punctate, intervals between punctures slightly wrinkled, head therefore almost dull. Antenna (Fig. 205) with elongate segments. Pronotum (Fig. 206) transverse, disc very finely punctate, intervals between punctures smooth (Fig. 208). Elytra as punctate as pronotum but punctures shallower and confluent into transverse wrinkles (Fig. 209). In the holotype is the apex of each elytron slightly produced, in remaining specimens roundly angulate.

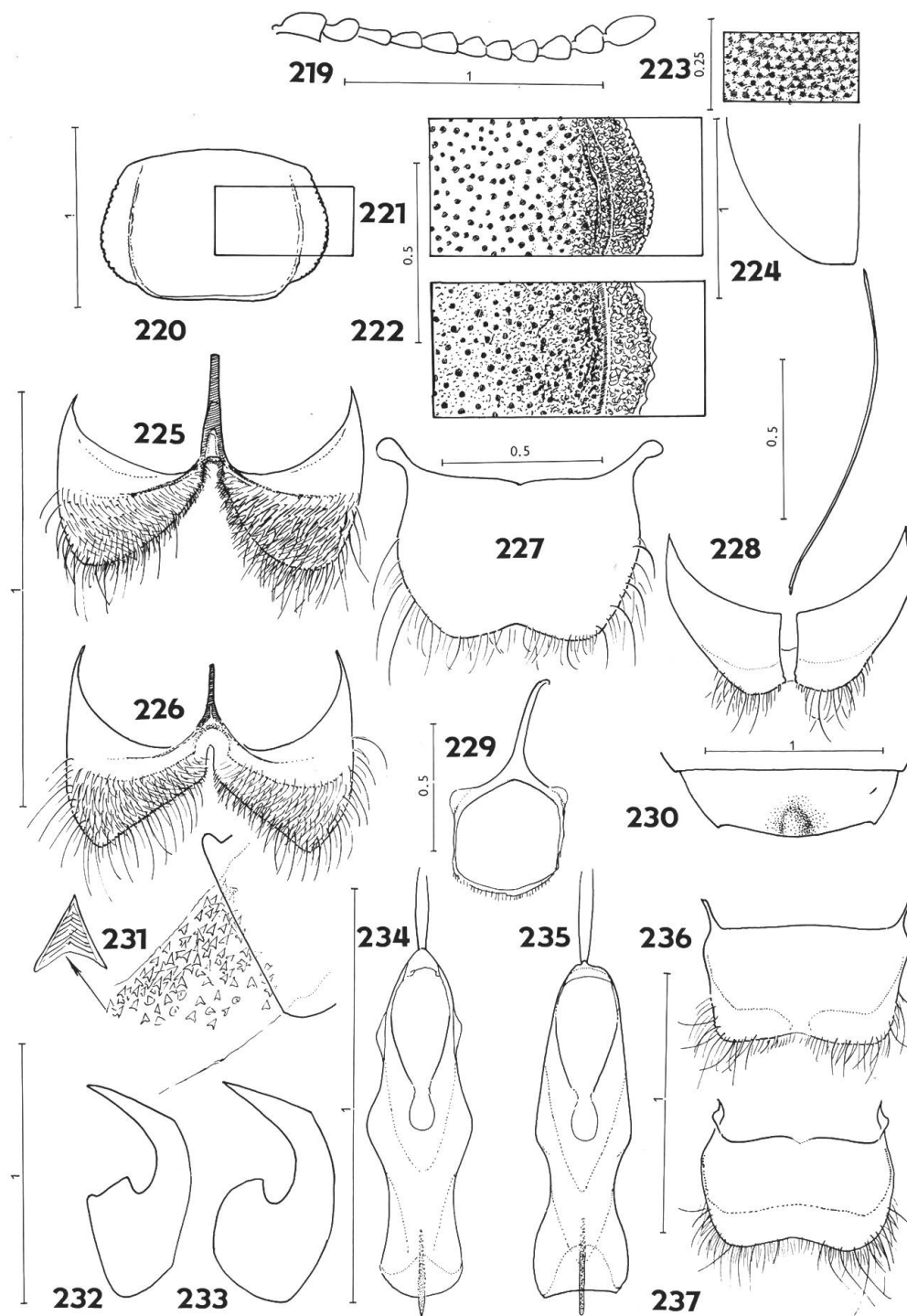
♂. Slender, extremities more robust. Pygidium transverse, its basal corners subfiliform (Fig. 217). Sternum VII nearly straight at apex (Fig. 207), VIII as shown (Fig. 210). Spicular fork (Fig. 214) relatively broad. Tegmen as shown (Fig. 211). Phallus (Fig. 216) nearly parallel-sided distally. Internal sac (Fig. 218) with conical spines.

Measurements. Length/AL = 3.31–3.50, AL/PL = 1.41–1.51, PW/HW = 1.27–1.85, PW/PL = 1.35–1.41, EL/PL = 3.35–3.47, EW/PW = 1.30–1.31; length = 3.73–3.86, width = 1.36–1.50 mm.

♀. Wider, extremities more slender. Pygidium emarginate at apex (Fig. 215). Sternum VII nearly straight at apex, VIII deeply emarginate. Ovipositor: bacular acumination is shown (Fig. 213).

Measurements. Length/AL = 3.86–4.15, AL/PL = 1.11–1.22, PW/HW = 1.35–1.39, PW/PL = 1.27–1.38, EL/PL = 3.05–3.28, EW/PW = 1.25–1.80, EL/EW = 1.64–1.83; length = 3.79–3.82 mm, width = 1.36–1.64 mm.

Types: Lectotype, ♂ (ZMB): "Turkest. Reitter" (white label, Schilsky's MS); "♂" (white label); "ruficornis \* Schils." (white label with a



Figs 219–237: *Chaetomalachius aeneus* Schilsky (219–221, 223–225, 229, 236 lectotype ♂): 219, right antenna. 220, outline of pronotum. 221, 222, puncturation of pronotum. 223, puncturation of elytra. 224, apex of left elytron. 225, 226, male sternum VIII. 227, female pygidium. 228, female sternum VIII. 229, spicular fork. 230 male sternum VII. 231, internal sac. 232, 233, phallus, side view. 234, 235, tegmen, ventral view. 236, 237, male pygidium.

black margin, Schilsky's MS). 1 ♀ (ZMB) and 2 ♂ (TMB) paralectotypes with data as Lectotype. 3 ♂ paralectotypes (ZMB): "Kuschka, Staudinger".

Remarks: SCHILSKY (1896) gives that 6 is the number of the type specimens, but all 7 specimens examined must be considered to be the type material.

Distribution (Fig. 297): southernmost Turcmenia (Kushka), locality data "Turkestan" are not exact.

16. **Chaetomalachius aeneus** Schilsky Figs 219–237, 293.

*Chaetomalachius aeneus* SCHILSKY, 1900, Die Käfer Europa's 37:5.

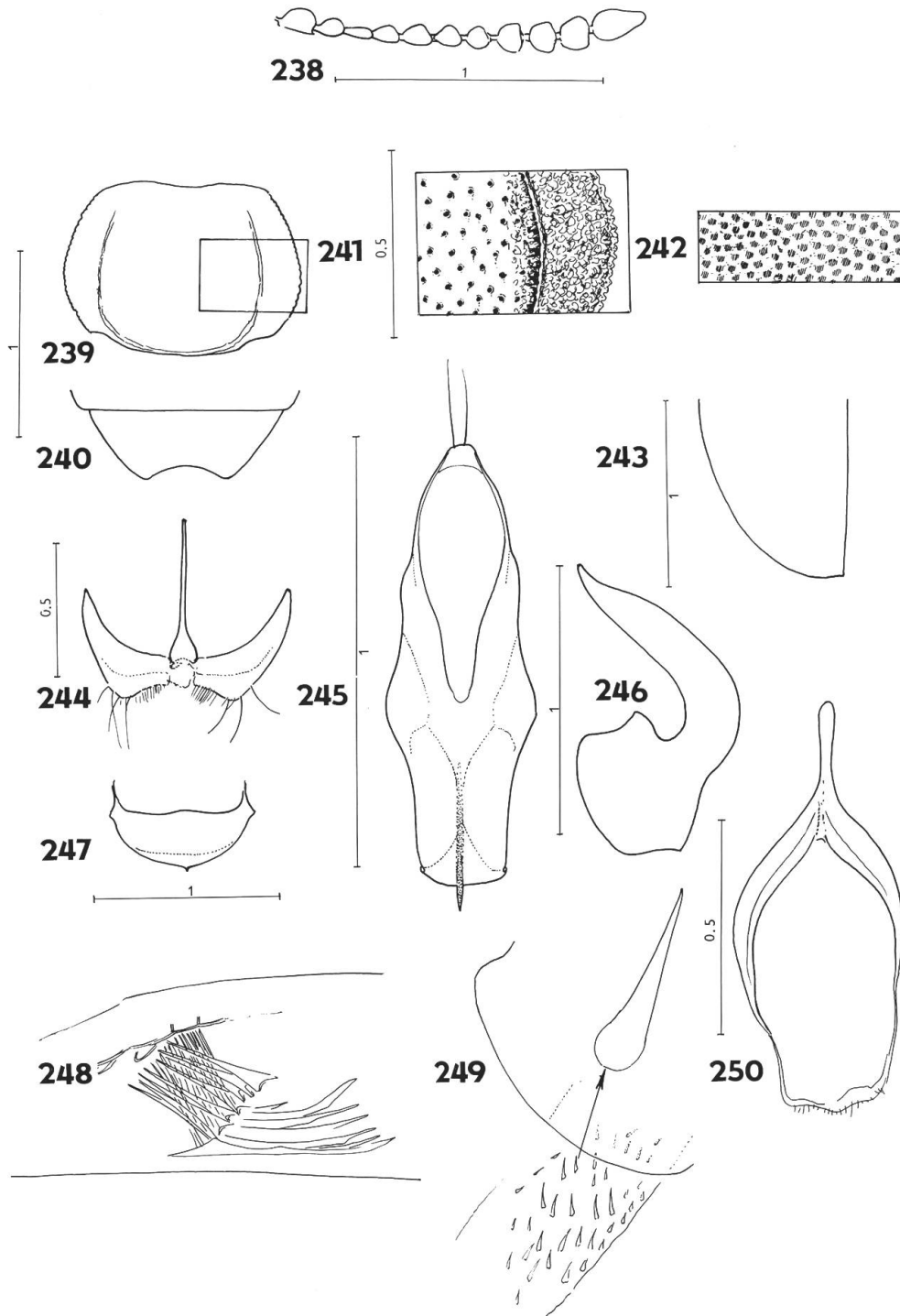
Remarkable by bicolorous decumbent pubescence. Small species, coloration black with brassy-green or bronze lustre. Integument very densely and finely punctate. Basal decumbent pubescence bicolorous: (a) pale hairs distributed overall upper surface, (b) brown pubescence present along sutura (except apex), and often also around scutellum or even overall base of elytra, or, occasionally, longitudinal brown strips are developed over middle of each elytron. Head very densely, irregularly punctate, antenna as shown (Fig. 219). Pronotum strongly convex, regularly crenate on side margins (Fig. 220), very densely punctate on disc, punctures variable in shape and arrangement (Figs 221–222). Elytra very densely, flatly and finely punctate, punctures confluent into transverse wrinkles (Fig. 223), elytral apices rounded respectively (Fig. 224).

♂. Parallelsided. Pygidium very transverse, variable in shape (Figs 236–237). Sternum VII deepened at apex (Fig. 230), VIII with short medial process, especially pubescent (Figs 225–226). Tegmen slightly constricted at base (Figs 234–235). Spicular fork subquadrate (Fig. 229). Phallus very short, slightly variable in shape (Figs 232–233).

Measurements. Length/AL = 3.00–3.27, AL/PL = 1.36 – 1.47, PW/HW = 1.25–1.29, PW/PL = 1.25–1.35, EL/PL = 3.00–3.08, EW/PW = 1.28–1.32, EL/EW = 1.77–1.79; length = 3.04–3.69 mm, width = 1.17–1.39 mm.

♀. Strongly convex, widened posteriorly. Pygidium shown (Fig. 227). Sternum VII arcuate at apex, VIII divided into two (Fig. 228). Ovipositor shown (Fig. 293).

Measurements. Length/AL = 3.50–4.43, AL/PL = 1.09–1.33, PW/HW = 1.36–1.45, PW/PL = 1.38–1.44, EL/PL = 3.20–3.33, EW/PW = 1.34–1.43, EL/EW = 1.62–1.80; length = 3.04–4.43 mm, width = 1.30–1.70 mm.



Figs 238–250: *Chaetomalachius bilyi* n. sp. (holotype ♀): 238, right antenna. 239, outline of pronotum. 240, male sternum VII. 241, puncturation of pronotum. 242, puncturation of elytra. 243, apex of left elytron. 244, male sternum VIII. 245, tegmen, ventral view. 246, phallus, side view. 247, male pygidium. 248, phallus, subapical portion. 249, internal sac. 250, spicular fork.

Types: Lectotype, ♂ (ZMB): “Buchara Staudgr” (white label Schilsky’s MS); “*aeneus* \* Schils.” (white label with a black margin, Schilsky’s MS). 1♀ and 2♂ paralectotypes (ZMB) without locality data, they most probably belong to the lectotype locality. 1♂, 1♀ paralectotypes: “Buchara” (ZMB). 1♂ paralectotype (TMB): “Samarkand, Reitter”.

Material examined: Aman-Kutan, IV,V, ca 100 specimens from various collectors (KMB). Khiva, 23.IV.72, Svozil (1♂, KMB). Kara-Tepe, 19.V.74, Pfeffer (1♂, KMB). Khamzabad, 2.V.77, Strejček (3♂ and 1♀, KMB). Yordon, 18.VI.81, Mráček (1♀, KMB). Kadamzhai, 5.V.75, Malý (1♀, KMB). Aruk-Tau, 20.IV.78, ♂♀ in copula, Strejček (KMB). Semiganch, 27.IV.81, Hladil (1♀, KMB). Varzob, 17.VI.81, Majer (2♀). Takhtaul, 22.IV.78, Strejček (2♂ and 7♀, KMB). Yavroz, 18.VI.81, Majer (2♂ and 2♀, KMB); Idem, Hanousek (2♀, KMB). Ramit, 26.IV.81, Olexa (1♂ and 1♀, KMB). Karategh. khrebet, 916 m, 1898, F.Hauser (1♀, DEI). Ak-Su river, 1898, F.Hauser (2♂ and 2♀, NMB). Karategh. khrebet, Baldshuan, 924 m, 1898, F.Hauser (1♀, DEI). Issyk-Kul, Ton stream (2♂, NMB).

#### 17. *Chaetomalachius bilyi* n.sp.

Figs 238–250.

Strongly differs from the preceding species by structure of terminalia (Figs 240–250), by brownish pedicel, and more coarsely punctate elytra (Fig. 242).

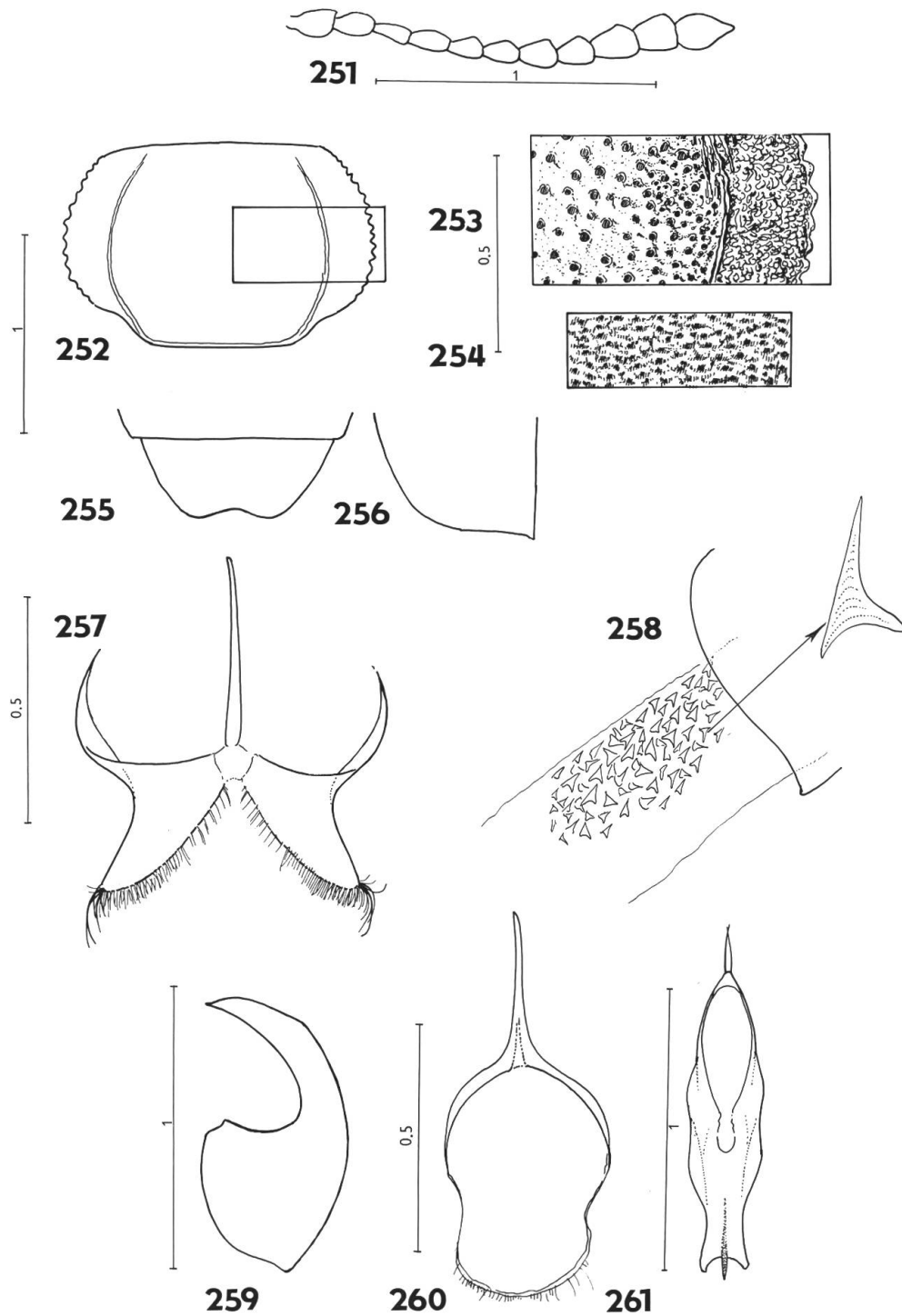
♂. Parallelsided, intensively transversely convex. Coloration black with deep brassy lustre, pedicel brownish. Integument finely and densely punctate, basal pubescence very short, sparse and suberect, the coarse one is black, short and sparse. Head finely and densely punctate, antenna shown (Fig. 238). Pronotum strongly convex, strongly arcuate at sides (Fig. 239), disc sparsely and regularly punctate, punctures with raised margins (Fig. 241). Elytra densely, regularly and relatively deeply punctate, punctures confluent into transverse wrinkles (Fig. 242), elytral apices jointly rounded (Fig. 247).

Pygidium nearly crescent (Fig. 247), pointed at apex. Sternum VII emarginate at apex, VIII (Fig. 244) divided into two. Spicular fork (Fig. 250) with short fork proper. Tegmen (Fig. 245) nearly parallelsided, widened near middle. Phallus (Fig. 246) subsinuate, in the region of phallotreme with complex armature composed of elongate spines (Fig. 248). Internal sac (Fig. 249) with guttate spines.

Measurements. Length/AL = 3.44, AL/PL = 1.25, PW/HW = 1.36, PW/PL = 1.25, EL/PL = 2.90, EL/PL = 1.71; length = 3.91 mm, width = 1.54 mm.

Holotype ♂ (NMB): “Tadžikistan, 24.VI.76, Hissar, Takob, Sv.Bílý”

Distribution (Fig. 297): Tadjikistan



Figs 251–261: *Chaetomalachius acutipennis* n. sp. (holotype ♂): 251, right antenna. 252, outline of pronotum. 253, punctation of pronotum. 254, punctation of elytra. 255, male sternum VII. 256, apex of left elytron. 257, male sternum VIII. 258, internal sac. 259, phallus, side view. 260, spicular fork. 261, tegmen, ventral view.

**18. *Chaetomalachius acutipennis* n. sp.** Figs 251–261.

Similar to *C. hauseri* from which it is distinguishable by very flat, nearly inconspicuous elytral puncturation (Fig. 254). Elytral apices pointed (Fig. 256), terminalia of a very special structure (Figs 255–261).

♂. Moderately convex, subparallel. Black, with deep-blue lustre. Integument very finely and densely punctate, basal pale pubescence extraordinarily short and fine, easily to rub off, coarse black pubescence relatively short, sparse. Head very densely punctate, more coarsely than elytra and pronotum, antenna shown (Fig. 251). Pronotum transversely oval, side margins regularly crenate (Fig. 252), disc relatively sparsely punctate, punctures with raised margins (Fig. 253). Elytra slightly constricted beyond humeri, apices pointed (Fig. 256).

Pygidium similar to that in *C. aenus*. Sternum VII emarginate at apex, (Fig. 255), VIII as shown (Fig. 257). Spicular fork broad (Fig. 260). Tegmen (Fig. 261) slender at base. Phallus (Fig. 259) short with very extensive base. Spines in internal sac with bifid bases (Fig. 258).

Measurements. Length/AL = 3.12–3.21, AL/PL = 1.52–1.61, PW/HW = 1.24–1.30, PW/PL = 1.43–1.44, EL/PL = 3.14–3.44, EW/PW = 1.27–1.35, EL/EW = 1.74–1.77; length = 4.23–4.54, width = 1.59–1.73 mm.

Types: Holotype ♂ (NMB): “Tadjikistan, Aruk-Tau (Garavuti), 20.IV.78, Strejček leg”. Paratype, ♂ (KMB) same data as Holotype.

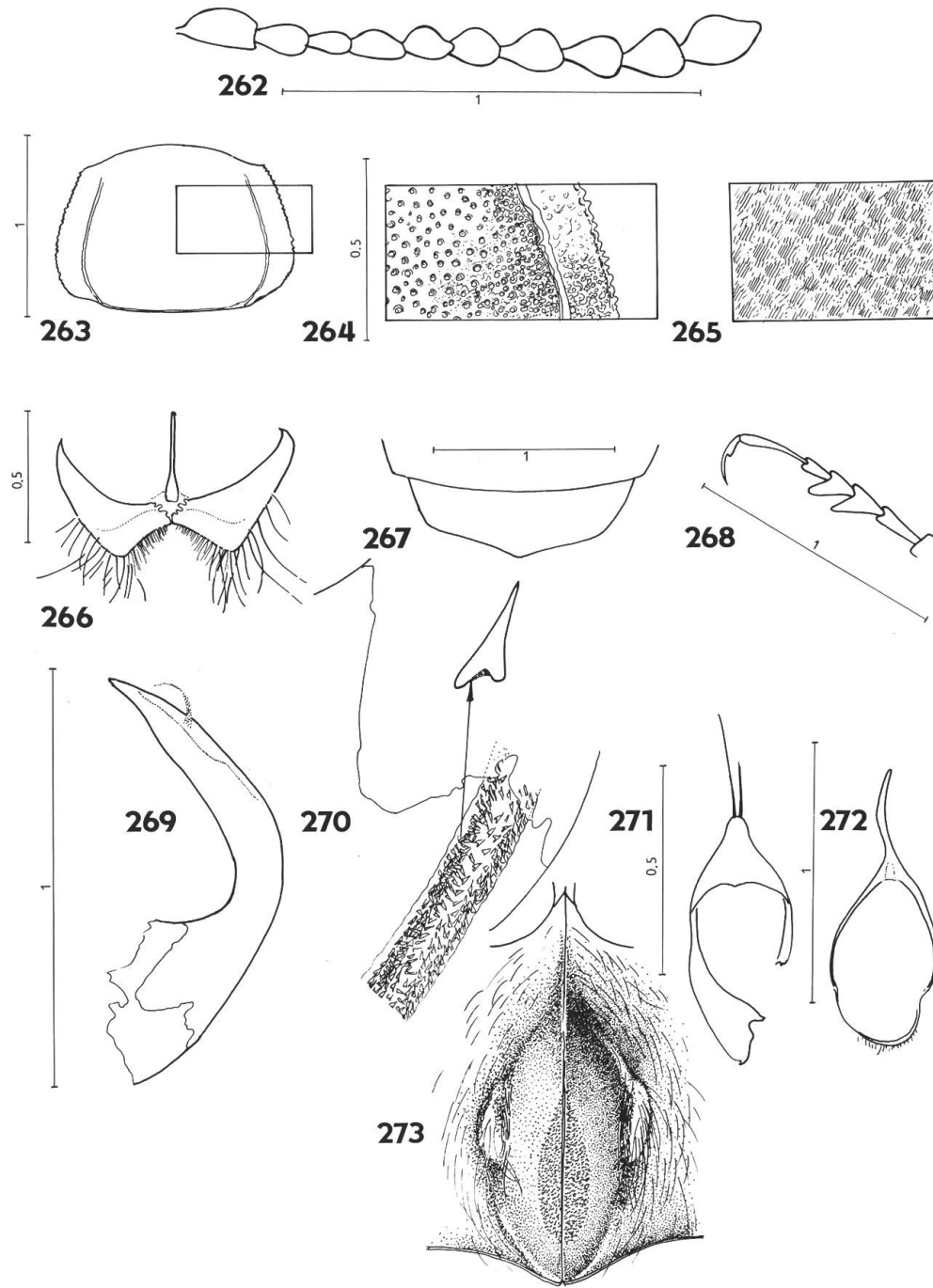
Distribution (Fig. 297): Tadjikistan (Aruk-Tau).

**19. *Chaetomalachius insidiosus* Khnzorian** Figs 262–272.

*Chaetomalachius insidiosus* KHNZORIAN, 1965, L'Entomologiste 21 (4–5): 81, Figs 3 a–c.

Remarkable by its very flat and posteriorly widened body, cudgel-shaped antennal segments (Fig. 262), finely punctate lateral pronotal areas (Figs 262–264), extraordinarily flatly punctate elytra (Fig. 265), and by the shape of phallus (Fig. 269).

♂. Nearly flat, widened posteriorly, intensively lustrous, coloration black with bronze lustre, pedicel orange, integument densely and finely punctate. Head densely and finely punctate, intervals between punctures slightly wrinkled and scarcely wider than punctures which have raised margins, antenna with cudgel-shaped joints (Fig. 262). Pronotum (Fig. 263) slightly convex, lateral areas proximally densely punctate,



Figs 262–272: *Chaetomalachius insidiosus* Khnzor. (holotype ♂); 273: *Chaetomalachius staudingeri* Schilsky: 262, right antenna. 263, outline of pronotum. 269, puncturation of pronotum. 265, puncturation of elytra. 266, male sternum VIII. 267, male sternum VII. 268, male front tarsus, side view. 269, phallus, side view. 270, internal sac. 271, tegmen, dorsal view. 272, spicular fork. 273, medial part of metanotum.

nearly smooth distally (Fig. 264), disc densely punctate, punctures here and there with raised margins, intervals slightly wrinkled in proximal portion, nearly smooth in middle and distal portions. Pronotum finely but conspicuously bordered around perimeter. Tarsomeres slender (Fig. 268). Elytra slightly convex, humerus prominent, upper surface finely, densely, and very flatly, inconspicuously punctate (Fig. 265).

Pygidium similar to that in *C. dasytoides* sternum VII tapered at apex (Fig. 267), VIII interrupted in middle, interruption irregularly denticulate (Fig. 266). Spicular fork shown (Fig. 272). Tegmen badly damaged (mishandled Khnzorian's dissection – Fig. 271), apex blunt, bisetose. Phallus (Fig. 269) damaged in the same way, distally nearly parallelsided, with a relic of ostial lamellae. Internal sac (Fig. 270) with shortly bifid spines.

Measurements. Length/AL = 3.00, AL/PL = 1.52, PW/HW = 1.50, PW/PL = 1.64, EL/PL = 3.00, EW/PW = 1.30, ELP/PL = 3.00, EW/PW EL/EW = 1.64; length = 3.95 mm, width = 1.45 mm.

Types: Holotype ♂ (NMB): "J. Klapperich, Kamdesh, 2000 m, Nuristan, 27.IV.53 Afghanistan (white label, printed); "*Chaetomalachius insidiosus* Khnz." (Khnzorian's MS); "Khnzorian det." (printed); "typus" (white label, Khnzorian's MS).

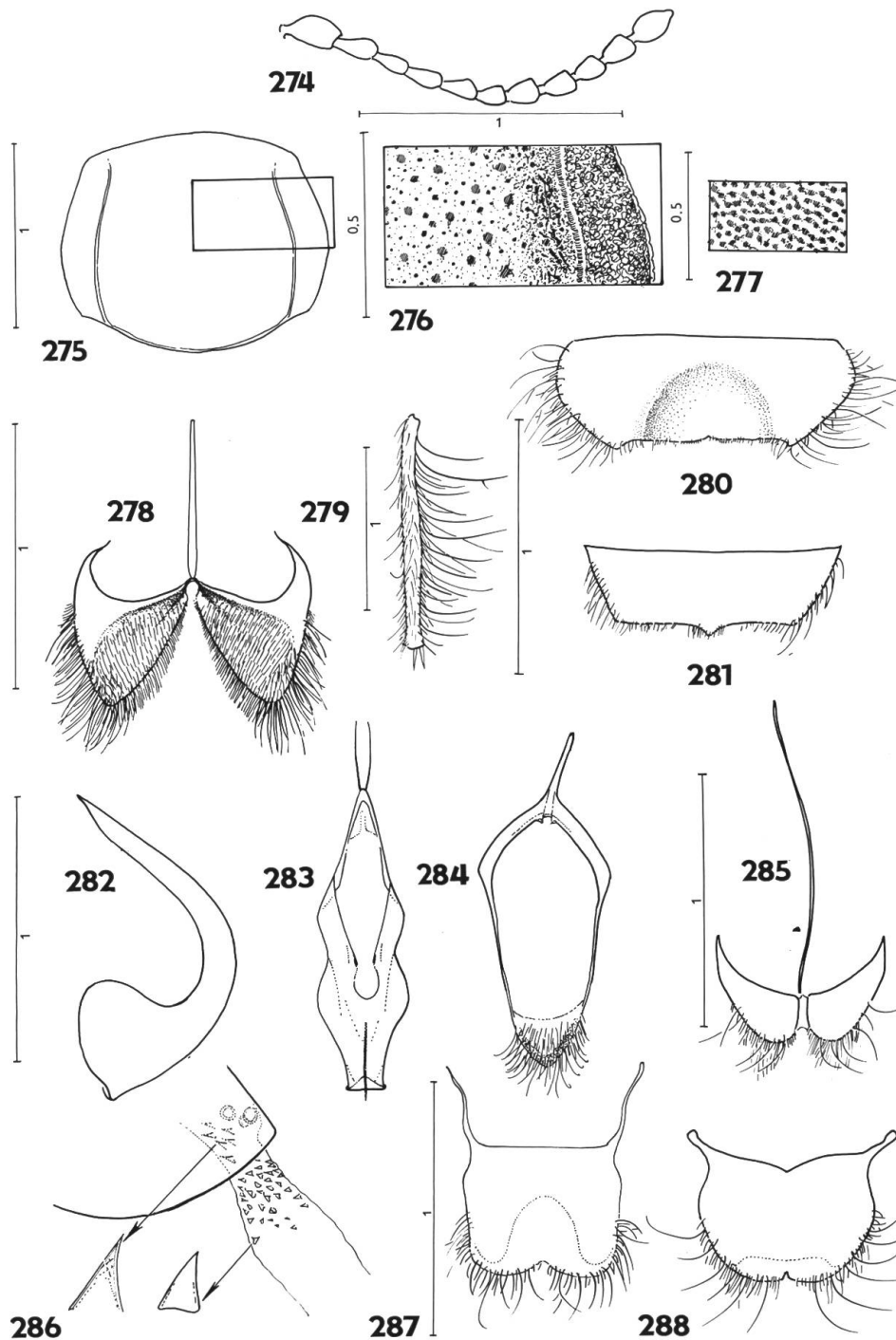
Distribution (Fig. 297): Afghanistan (Nuristan).

### **Setomalachius** n. subg.

Type-species: *Chaetomalachius staudingeri* SCHILSKY, 1900  
(present designation by monotypy). Gender: masculine.

Sexual dimorphism very well developed. Males more or less flatly convex, parallelsided, pronotum subconical. Females strongly convex, widened posteriorly, pronotal sides arcuate.

Male. Middle tibiae with a cluster of long hairs on innerside (Fig. 279). Pygidium with long, sinuate, basal corners (Fig. 287). Spicular fork angulate at apex, fork proper about four-times shorter than spiculae (Fig. 284). Sternum VII arcuately excavate (Fig. 280), phallus bent (Fig. 282). Metasternum excavate mediodistally, with ciliate protuberances at the sides of excavation (Fig. 273).



Figs 274–288: *Chaetomalachius (Setomalachius) staudingeri* Schilsky (274–280, 282–284, 286–287, (lectotype ♂): 274, right antenna. 275, outline of pronotum. 276, puncturation of pronotum. 277, puncturation of elytra. 278, male sternum VIII. 279, male middle tibia. 280, male sternum VII. 281, female sternum VII. 282, phallus side view. 283, tegmen, ventral view. 284, spicular fork. 285, female sternum VIII. 286, internal sac. 287, male pygidium. 288, female pygidium.

20. *Chaetomalachius* (*Setomalachius*) *staudingeri* Schilsky

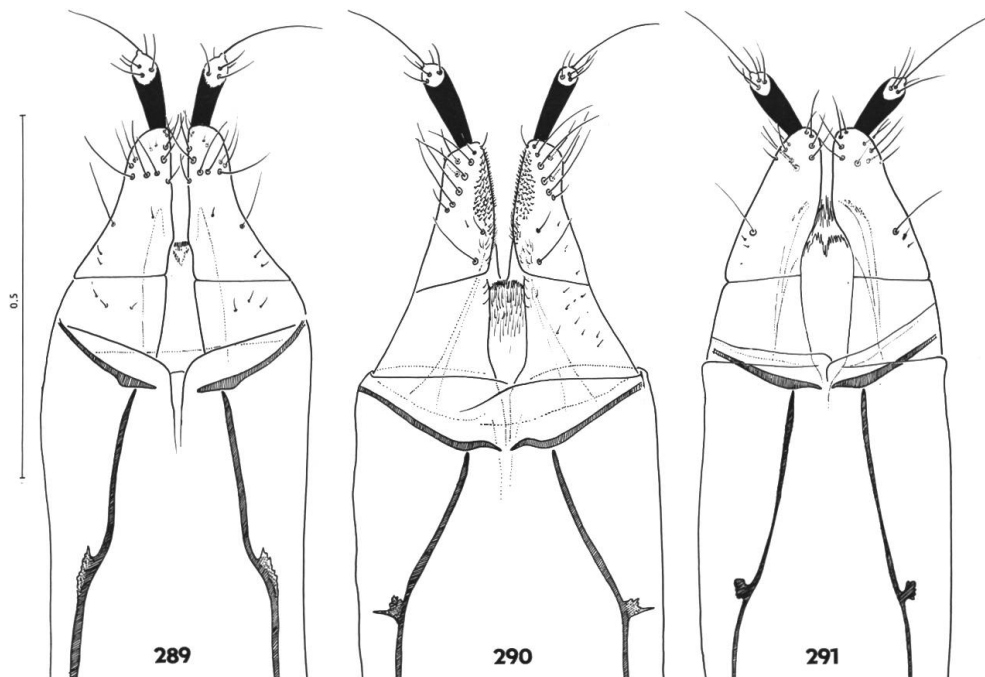
Figs 274–288, 291, 295.

*Chaetomalachius Staudingeri* SCHILSKY, 1900, Die Käfer Europa's 37: 6.*Chaetomalachius crinipes* KHNZORIAN, 1965, L'Entomologiste 21 (4–5): 83, n. syn.

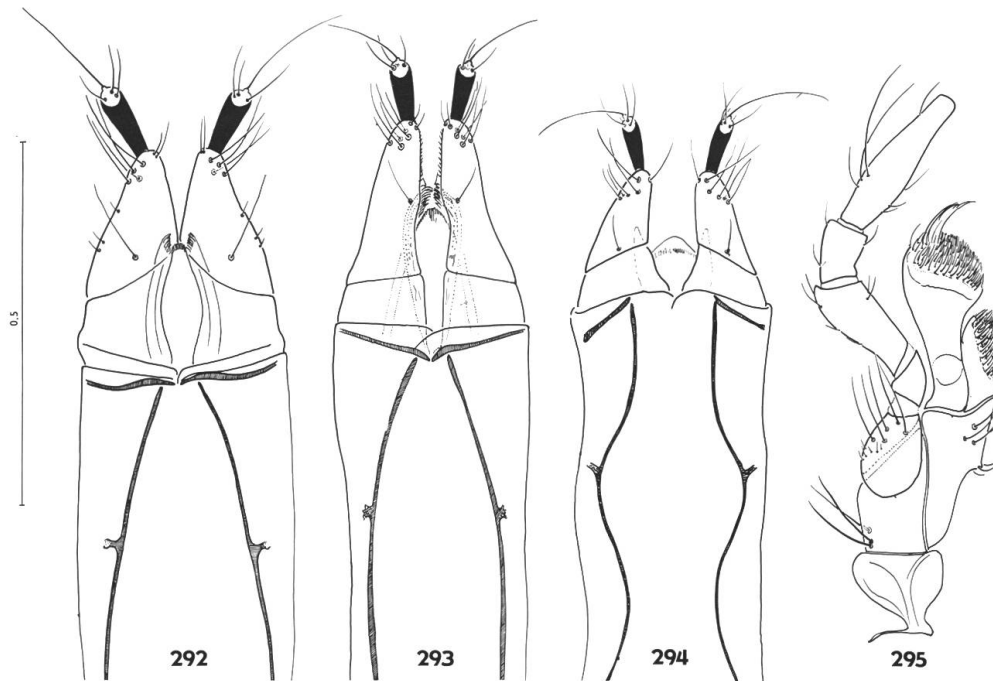
Remarkable by combination of deep-blue lustre, expressively punctate pronotal disc (Fig. 276) and side pronotal margins nearly smooth (Fig. 275).

Robust, black, with deep-blue lustre having greenish (exceptionally brassy) tinge. Integument very finely and densely punctate. Pale basal pubescence sparse, very short, suberect, the coarse one is also suberect, very dense. Head very densely, finely punctate, intervals between punctures wrinkled, antennal segments slightly elongate (Fig. 274). Maxilla as shown (Fig. 295). Pronotum nearly smooth on side margins, subconical in shape, with dual puncturation (Fig. 276). Elytra finely punctate (Fig. 277).

♂. Slender, moderately convex. Pronotum narrow, slightly constricted near apex (Fig. 275), shallowly emarginate at sides of base. Metasternum excavate medially, with ciliate protuberance at sides of



Figs 289–291: ovipositor: 289, *Chaetomalachius dasytoides* Kraatz. 290, *Chaetomalachius marginicollis* (Reitter). 291, *Chaetomalachius staudingeri* Schilsky (Scale = 1 mm).



Figs 292–294: ovipositor; 295, left maxilla: 292, *Chaetomalachius hauseri* (Schilsky). 293, *Chaetomalachius aeneus* Schilsky. 294, *Chaetomalachius dispar bodemeyeri* n. ssp. (Allotype). 295, *Chaetomalachius staudingeri* Schilsky, male.

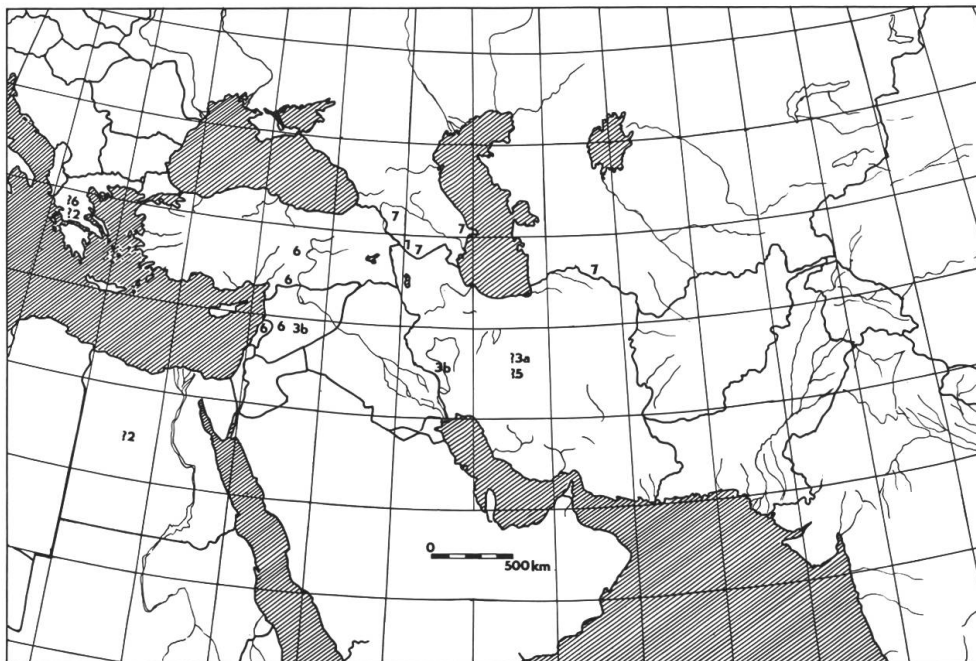


Fig. 296: Distribution of the genus *Chaetomalachius* Kraatz. The numbers used in the descriptive part for each species appear on the map and show the distribution.

excavation (Fig. 273). Legs robust (femora about as twice stout as those in females), apparently with dual pubescence: (a) whitish, dense, adherent (b) black, coarse, long, erect, especially the innerside of middle tibiae are provided with a cluster of long dense hairs (Fig. 279). Pygidium subquadrate (Fig. 287), with very long basal corners, shallowly emarginate at apex. Sternum VII excavate and ciliate at sides (Fig. 280), VIII strangely emarginate and ciliate (Fig. 278). Spicular fork nearly shovel-shaped, with very long spiculae, fork proper very short, nearly four-times shorter than spiculae, bluntly pointed at apex (Fig. 284), tegmen (Fig. 283) medially emarginate at sides, phallus (Fig. 282) nearly rectangularly bent, nearly parallelsided distally. Internal sac with two kinds of spines and formations (Fig. 286).

Measurements. Length/AL = 2.72–3.12; AL/PL = 1.32–1.52; PW/HW = 1.32–1.41; PW/PL = 1.12–1.31; EL/PL = 2.60–2.66;

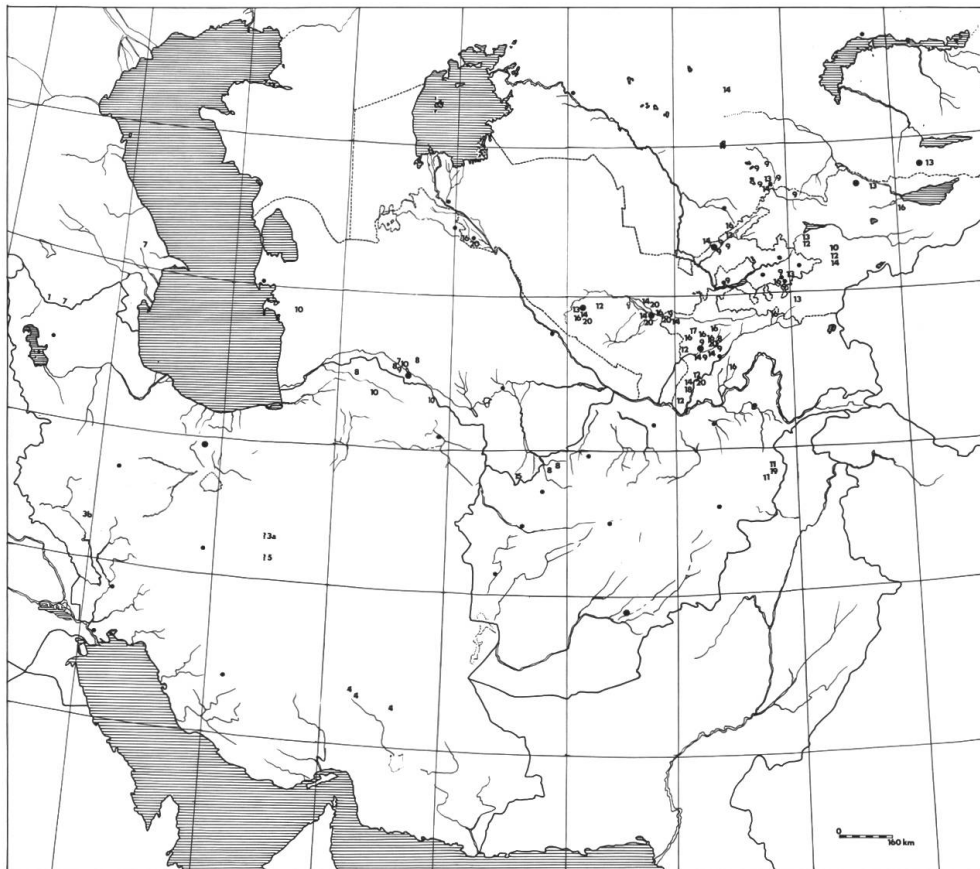


Fig. 297: Distribution of the genus *Chaetomalachius* Kraatz. The numbers used in the descriptive part for each species appear on the map and show the distribution.

EW/PW = 1.29–1.34; EL/EW = 1.67–1.76; length = 4.23–5.45 mm; width = 1.68–2.09 mm.

♀. Robust, strongly convex, strongly widened posteriorly. Pronotum broader. Metasternum with no excavation. Legs more slender, tibiae unarmed. Pygidium shown (Fig. 282), sternum VII shown (Fig. 281), VIII interrupted in middle (Fig. 285). Ovipositor shown (Fig. 291).

Measurements. Length/AL = 3.60–3.96; AL/PL = 1.11–1.25; PW/HW = 1.47–1.56; PW/PL = 1.33–1.39; EL/PL = 3.00–3.09; EW/PW = 1.31–1.46; EL/EW = 1.59–1.67; length = 4.32–5.23 mm; width = 1.86–2.32 mm.

Types: Lectotype, ♂ (ZMB): “Buchara Staudgr.” (white label, Schilsky’s MS); “Staudingeri \* Schils.” (white label with a black margin, Schilsky’s MS). 4♂ and 6♀ paralectotypes (ZMB) with data as Holotype. 2♀ paralectotypes (ZMB) and 1♂, 1♀ paralectotypes (TMB) labelled “Buchara”.

Material examined: Yavroz, 28.IV.81, Jelínek (1 ♂, DEI ; 4 ♂ and 7 ♀, KMB); Idem, 25.IV.80, Dvořák (1 ♂ and 7 ♀, SNM). Idem, Kubáň (1 ♂, NMB; 3 ♂ and 4 ♀, KMB); Idem, Hladil (1 ♂ and 3 ♀, KMB); Idem, Hanousek (9 ♀, KMB). Ramit, 26.IV.81, Olexa (11 ♂ and 7 ♀, KMB); Idem, V.81, Brodský (5 ♂ and 10 ♀, KMB). Bulbulchashma, 18.IV.80 Kubáň (2 ♀, KMB). Pendzhikent, 28.IV.74, Kubáň (2 ♀, KMB). Aman-Kutan, 23.IV.78, Dvořák (2 ♂, NMB); Idem, 21.IV.72, Svozil (2 ♂ and 1 ♀, KMB); Idem, 23.IV.78. Bílý (1 ♂, KMB); Idem, Horák (1 ♂ and 1 ♀, KMB). Khiva, 23.II.72, Svozil (1 ♀, KMB).

Type material of *Chaetomalachius crinipes* Khnzorian is deposited in Khnzorian’s private collection (Erivan). Holotype, ♂ comes from Tadjikistan, Gandzhina, 3.IV.1964, Khnzorian leg.

Distribution (Fig. 297): Tadjikistan, Uzbekistan.

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