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**New species of Acmaeoderini from South-West Asia
(Coleoptera, Buprestidae)**

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Taxonomy, *Acmaeodera* 2 spp. n., *Acmaeoderella* 2 spp. n., keys

Abstract. Four new species of Acmaeoderini: *Acmaeodera holzschuhi* sp. n. from East Turkey (*A. xanthelytra* group), *Acmaeodera anatolica* sp. n. from East Turkey (*A. bipunctata* group), *Acmaeoderella nannorrhopsicola* sp. n. from South-East Iran (*A. adpersula* group) and *Acmaeoderella pseudovirgulata* sp. n. from Cyprus (*A. virgulata* group) are described and are differentiated from related species in diagnostic keys.

Recently we have had the opportunity of studying extensive material of Buprestid collected by various individuals and expeditions in southwestern Asia. Much of this material belongs to the genera *Acmaeodera* ESCHSCHOLZ and *Acmaeoderella* COBOS. Two species from each of these genera have proved to be new and are now described below together with differential diagnoses.

Acmaeodera holzschuhi sp. n.

(Plate I, 1)*

Robust, slightly depressed, black species with bronze lustre, elytra straw-yellow with black-brown pattern; middle part of pronotum, vertex and elytra with brownish hairs, lateral parts of pronotum and whole ventral side of body with white hairs.

Head with small depression in the middle part of frons which is slightly enlarged in the middle part and narrowed in the upper part; vertex 1.02 to 1.06 times wider than frons between antennal articulations and 1.41—1.71 times wider than diameter of eye; clypeus widely incurved at anterior margin; head with small umbilicate punctures whose central grains are compact or composed from several smaller parts; whole head with brownish pubescence and fine, white hairs directed towards the mouth parts; antennae enlarged from 5th segment, 1.65—1.88 times longer than the vertical diameter of eye; antennae of male somewhat longer and more enlarged than those of female.

Pronotum wide, flat, with widest part at posterior third; lateral margins slightly arcuate in anterior part and sharply arcuate in posterior part; anterior margin slightly lobate, posterior margin almost straight; pronotum 1.78 to 1.81 times wider than long; basal pits of pronotum sharp, situated in the

* Plates I and II will be found at the end of this issue.

bottom of shallow depressions; middle part of pronotum without longitudinal groove; notopleural keel feeble but distinct; whole surface of pronotum with small, dense, umbilicate punctures which are replaced in the middle part by fine, simple punctures; anterior part of pronotal disc with brownish hairs, posterior part and lateral margins with white ones.

Elytra wide, flat, 2.24—2.36 times longer than wide at the base; lateral sides parallel in anterior two-thirds and acuminate in posterior third; epipleura straight, without subhumeral notch; rows of punctures consisting of prolonged and shallow punctures more distinct in posterior third; intervals lustrous, flat, with rows of large but shallow punctures; coloration of elytra straw-yellow, the ninth interval and apical beam reddish-brown and humeral swellings black; pattern of elytra consisting of brownish-black longitudinal stripes situated at the eighth and ninth intervals and at the suture; these stripes are connected at the inner margin with small irregular and variable spots on the disc of elytra; elytra covered with rigid black bristles and with short white hairs in posthumeral parts.

Anterior margin of prosternum straight, with very fine marginal groove and with fine shallow transversal depression; structure of prosternum consisting of shallow umbilicate punctures; abdomen covered with rasp-shaped punctures; entire ventral side of body with silver pubescence.

Hind coxae with tooth at the anterior margin and hind tibiae with comb of brown bristles at outer margin; claws with large tooth at inner margin, the shape of this tooth differing slightly in the sexes.

Aedeagus Plate II, 6, 7; parameras with small outgrowths at inner margin; ovipositor (Plate II, 14) pocket-shaped, slightly sclerotized.

Length 7.5—9.6 mm; width 2.5—3.3 mm.

Holotype: ♂, Anatolien, prov. Antalya, 26. 5. 1968, C. Holzschuh leg.; Paratypes: 2 ♂♂, 3 ♀♀, the same data. Holotype deposited in collection of C. Holzschuh (Wien), paratypes deposited in collections of C. Holzschuh and the authors.

Bionomy unknown.

A. holzschuhi sp. n. belongs in the *A. pulchra*-group which is characterized by the straight margin of the epipleura, by outgrowths on the inner margins of the parameras (Plate II, 6) and by the wide, pocket-shaped ovipositor. Species of this group can be distinguished by the following key characters:

- 1 (4) Elytra black or dark brown.
- 2 (3) Prolonged, less robust species; apex of elytra broadly rounded; black-brown with brown short and rigid pubescence; pronotum with rounded lateral margins and with dense umbilicate punctuation; 6.9 mm; Mongolia, South Gobian District . . . *A. medvedevi* VOLK.
- 3 (2) Broad, robust species; apex of elytra acuminate; black with long black hairs; lateral margins of pronotum lobate; punctuation of pronotum consisting of rough punctures; 10.0—12.0 mm; Corsica *A. revelieri* MARS.
- 4 (1) Elytra dark or yellow with characteristic pattern or entirely yellow.
- 5 (8) Elytra dark with yellow, orange or red spots and stripes.
- 6 (7) Elytra bluish-black with transverse red or orange stripes or spots; 10.0—13.0 mm; Mediterranean *A. pulchra* (F.)
- 7 (6) Elytra brown with longitudinal stripe of isolated yellow spots and with indistinct lateral and apical spots of the same colour; 7.0—8.0 mm; Cyprus *A. rufocincta* BAUDI
- 8 (5) Elytra yellow or brownish yellow with or without pattern.
- 9 (10) Elytra unicolourous brownish yellow with dark short, rigid hairs; apical part of each paramera obtuse and bent inwards against one another; apex of aedeagus with long stick-shaped outgrowth; 9.6 mm; Turkey, Amanus Mts. *A. xanthelytra* OBNB.
- 10 (9) Elytra yellowish brown or yellow with large and indistinct dark pattern; parameras and aedeagus as in Plate II, 6, 7.

- 11 (12) Prolonged, less robust species; elytra wider than pronotum, with indistinct brown spot which is enlarged posteriorly; epipleuras distinctly incurved under humeral swellings; pronotum bearing recumbent hairs; structure of pronotum consisting of large umbilicate punctures and longitudinal wrinkles; tooth of claws in male reaching apex of claws; 5.0—6.0 mm; Greece, Cyprus *A. cercopia* KIESW.
- 12 (11) Broad, robust species; elytra same width as pronotum, with black-brown pattern (Plate I, 1); epipleuras straight; pronotum with erect hairs and with small umbilicate punctures, without longitudinal wrinkles; tooth of claws in male not reaching apex of claw; 7.5—9.6 mm; Turkey, Antalya *A. holzschuhi* sp. n.

Acmaeodera anatolica sp. n.

(Plate I, 2)

Small, robust, slightly depressed, black species with bronze lustre; elytra brownish-black with longitudinal yellow stripe at 4th—8th interval; entire body with short white pubescence.

Head wide, frons slightly depressed and enlarged in middle part, its lateral margins convergent at vertex; vertex 1.00—1.06 times wider than frons between antennal articulations and 1.64—1.66 times wider than diameter of eye; clypeus wide, deeply notched at anterior margin; structure of head consisting of large, round, shallow punctures bearing indistinct central grooves and excentric micropunctures with white hairs; antennae long (2.00 times longer than vertical diameter of eye in male and 1.87 times longer in female); antennae enlarged from 4th (♂) or 5th (♀) segment, usually somewhat more enlarged in male.

Pronotum wide, flattened, with maximum width at middle; lateral margins of pronotum equally rounded both anteriorly and posteriorly; anterior and posterior margins straight, pronotum 1.62 times wider than long, with feeble basal pits; disc of pronotum without central longitudinal groove; notopleural keel very feeble, sometimes interrupted or missing; lateral margins with large, shallow, umbilicate punctures; disc of pronotum only with simple fine punctures on smooth and lustrous background; pubescence of whole pronotum consisting of fine, recumbent, white hairs.

Elytra wide, 2.10—2.13 times longer than wide at humeral part, slightly incurved behind humeral swellings and gradually acuminate in posterior third; apex of elytra obtuse and rounded; epipleuras slightly incurved under humeral swellings; rows of elytral punctures slightly grooved, consisting of prolonged and connected punctures; intervals flat, lustrous, 2.5—3.0 times wider than rows of punctures, with fine structure consisting of micropunctures and very fine wrinkles; basal coloration of elytra brownish black or black with two yellow irregular stripes; elytral pubescence consisting of rows of fine, white hairs inclined to apex.

Entire surface of sternum and lateral margins of first abdominal segment with dense umbilicate punctuation, other abdominal segments with rasp-shaped punctures; anal tergite widely rounded in both sexes and its margin slightly elevated; entire ventral side of body with long white pubescence.

Hind coxae with tooth at outer margin, hind tibiae with row of brownish bristles outside; small brushes of hairs developed only on the first three tarsal segments; claws with tooth on inner margin.

Aedeagus Plate II, 8, 9; ovipositor (Plate II, 15), shortened; with widely inserted styli.

Length 4.2—5.3 mm, width 1.5—1.9 mm.

Holotype: ♂, Anatolien, prov. Icel, Silifke, 1. 5. 1959, Holmann leg. Paratype: ♀, the same data; type material deposited in the collection of S. Bilý.

Biology unknown.

A. anatolica sp. n. belongs in the *A. bipunctata*-group and is related to *A. rubromaculata*, *A. quadrifaria* and *A. flavonotata* on the basis of the head structure and pronotal pubescence. It differs from *A. rubromaculata* and *A. flavonotata* by the short ovipositor and by the form of aedeagus. Coloration and punctation are very variable in these species and they intergrade. *A. quadrifaria* differs from *A. anatolica* sp. n. by its mixed pubescence (brown and yellow) and by its characteristic pattern consisting of 4 irregular longitudinal strips on the 3rd—5th and 9th—10th intervals.

Acmaeoderella nannorrhopsicola sp. n.

(Plate I, 3)

Large, very prolonged and cylindrical species; pronotum in two colours with feebly serrate posterior margin, slightly longer than wide; elytra straw-yellow, sometimes with two small black spots; pubescence consisting of white, small scale-like hairs; claws without tooth.

Head black and lustrous; frons vaulted without depressions; vertex without keel or with feeble longitudinal keel, 1.60 (♂) or 1.95—2.00 (♀) wider than diameter of eye; lateral margins of frons straight, parallel; structure of head consisting of large umbilicate punctures with large central grains and very fine basal microstructure; head covered with recumbent, white lancet-shaped scales; antennae 1.39 (♀) to 1.53 (♂) times longer than vertical diameter of eye, enlarged from 5th segment; antennal segments 5—10 equal, triangular with obtuse apex.

Pronotum very prolonged with maximum width in the middle; lateral margins feebly and equally rounded both anteriorly and posteriorly; anterior margin strongly lobate, posterior margin twice slightly incurved, with feeble keels against elytral intervals 5—7; pronotum 1.02—1.05 times longer than wide at the base; disc of pronotum broadly flattened, with feeble medial groove reaching the first third; viewed laterally the dorsal surface of pronotum is straight; notopleural keels missing; lateral margins and base of pronotum yellow (basal yellow spot isolated in the holotype), posterior and central parts black; structure of pronotum consisting of rough, deep punctures without central grains and connected each other; structure indistinct on yellow spots; white, oval, scale-like hairs covering whole pronotum are somewhat narrower in middle part; anterior part of pronotum also with short, sparse bristles.

Elytra slender, very prolonged, 2.73—3.02 times longer than wide at the base; lateral margins slightly incurved behind humeral swellings and gradually arcuate in posterior third; base of elytra twice deeply incurved, humeral swellings large, epipleural subhumeral notch deep; elytral rows of punctures slightly grooved and consisting of large oval punctures; intervals of the same width as rows of punctures (♂) or 1.5—2.0 times wider (♀); ninth interval not elevated; each interval with very fine punctures; elytra yellow, male with small brown spots situated in posterior third of intervals 5—6; lateral intervals somewhat darker; lateral margins and posterior part of elytra

covered with oval, white scales, anterior part with short yellowish bristles; prosternum and abdomen yellow; lateral margins of abdominal sternites dark; entire ventral side of body with simple, fine punctures somewhat enlarged at lateral parts of prosternum and covered with very dense scales.

Legs short and yellow; tarsi of the same length as tibiae; small brushes of hairs feebly developed on the first two tarsal segments only; claws simple, without tooth at inner margin.

Aedeagus Plate II, 10, 11.

Length 6.0—8.2 mm; width 1.6—2.0 mm.

Holotype: ♂, East Iran, Khash, Beloudjistan, 11. 7. 1975, Adeli leg. Paratypes: 1 ♀, the same data; 1 ♀, SE Iran, 21 km SW Saravan, Beloudjistan, 29. 3. 1973, loc. no. 140, Exp. Mus. Nat. Praha. Holotype deposited in the collection of S. Bily, paratypes deposited in the collections of National Museum, Praha and Zoological Institute, Leningrad.

Biology: all specimens reared from the endemic Beloudjistan palm *Nannorrhops ritchieana* (Arecales, Coryphaea).

A. nannorrhopsicola sp. n. belongs in the group of species having serrate posterior margin on the pronotum and may be placed near *A. adpersula*, *A. filiformis*, *A. despecta* and *A. longissima*. For the determination of these species the following key is given:

- 1 (10) Keels at the base of pronotum very distant, their tops lying against humeral swellings; body very prolonged, slender; width and length of pronotum equal or pronotum is slightly wider (max. 1.2 times); pronotum slightly elevated in anterior part (viewed laterally).
- 2 (7) Claws without tooth.
- 3 (6) Ninth elytral interval elevated in posterior third, bearing serrate keel; pronotum shorter than wide.
- 4 (5) Bronze species with yellowish brown elytra; elytral intervals, humeral swellings and apex slightly darker; vertex without keel, twice wider than diameter of eye; pronotum without longitudinal depression, punctuation same as on head; elytral rows consisting of large, isolated, square punctures; diameter of elytral punctures and width of intervals equal; elytra with microstructure; scales oval, covering whole surface of head and pronotum; length 7.0 mm; Central Asia: Takla Makan Desert, North Alaskan *A. filiformis* (REITT.)
- 5 (4) Black-bronze species sometimes with copper lustre; elytra dark brown or brown with yellow spots sometimes connected longitudinally; vertex with distinct keel, 1.52—1.82 times wider than diameter of eye; pronotum with wide longitudinal depression; punctures of pronotum distinctly larger than these on head; punctures of elytral rows oval, often connected, diameter 1.5—2.0 times smaller than width of intervals; microstructure consisting of very fine punctures and wrinkles; scales oval or lancet-shaped, not covering surface of head and pronotum; length 4.5—5.5 mm; Cyprus, Palestine, Syria, Irak *A. despecta* (BAUDI)
- 6 (3) Ninth interval very feebly elevated in posterior third, without serrate keel, with small grains only; pronotum longer than wide; lateral margins of pronotum, part of ventral side and legs yellow; elytra yellowish, sometimes with small, isolated, brown spots; length 6.0—7.2 mm; East Iran, Beloudjistan *A. nannorrhopsicola* sp. n.
- 7 (2) Claws with tooth on inner margin.
- 8 (9) Vertex without sharp keel; bronze species with copper or lead lustre; elytra brownish with bronze lustre; pattern of elytra very variable, consisting of numerous small yellow spots with tendency to create transverse stripes; scales on intervals in many rows, oval or lancet shaped; length 5.2—9.8 mm; Iran, Irak, Mediterranean . *A. adpersula* (ILL.)
- 9 (8) Vertex with sharp keel; frons often with wide depression surrounding this keel anteriorly and laterally; bronze species with lead lustre; elytra brownish violet with orange or straw-yellow pattern consisting of prolonged, isolated spots or with wide yellow stripe along the suture; interval with one row of small scales which are oblong or somewhat enlarged apically; length 6.5—8.7 mm; East Mediterranean, Iran *A. longissima* (AB.)

- 10 (1) Keels at base of pronotum not so distant, their tops lying against intervals 3-4; body wide and robust; pronotum transverse, slightly elevated in middle or in posterior third (viewed laterally) *A. flavofasciata* (PILL.) and related species: *A. mimonti* (BOEELD), *A. farinosa* (REICHE), *A. albifrons* (AB.), *A. glasunovi* (SEM.), *A. dsungarica* (OBNE.).

Acmaeoderella pseudovirgulata sp. n.

(Plate I, 4)

Small, cylindrical, copper-bronze species; elytra yellow with pattern consisting of prolonged dark spots and stripes and with white, prolonged scales.

Frons vaulted of slightly flattened, without depression, enlarged vertically, widest part in middle; vertex 1.55-1.78 times wider than diameter of eye and 1.00-1.18 times wider than frons between antennal articulations; head covered with shallow punctures bearing indistinct central grains and excentric micropunctures with scales inclined forward; antennae 1.67-1.97 (♂) or 1.42-1.64 (♀) times longer than vertical diameter of eye, enlarged from 4th (♂) or 5th (♀) segments; shape of 4th segment variable; segments 4-10 usually more robust and wider in male than in female.

Form of pronotum very variable; lateral margins converging posteriorly or converging from middle part anteriorly and posteriorly; maximum width in the first fourth or at middle, anterior margin widely lobate, basal margin straight; pronotum 1.24-1.55 times wider than long; central longitudinal depression indistinct or presented by wide shallow and oval depression in posterior half; laterobasal pits very small, indistinct; notopleural keels missing; pronotum covered with deep, wide, oval cells with lustrous bottoms, sometimes with very fine punctures bearing hairs; simple punctuation not developed; scales narrowly lancet-shaped on disc and broadly lancet-shaped on lateral parts.

Elytra slender 2.15-2.47 times longer than wide at base, almost parallel and widely acuminate in posterior third; apex of elytra narrowly rounded and slightly serrate, humeral swellings well-developed; subhumeral epipleural notch small but distinct; ninth interval slightly elevated in posterior third; rows of elytral punctures not grooved, consisting of large, oval, shallow punctures which are not connected to each other (Plate II, 5); diameter of these punctures usually larger than width of intervals which show microstructure consisting of fine wrinkles and micropunctures; surface of elytra appearing rough; pattern of elytra (resembling of pattern of *A. virgulata*) consisting of narrow, longitudinal, yellow stripes on brownish bronze background; second interval yellow at base; scales large, lancet-shaped, inclined posteriorly, distributed on intervals in simple rows or in double rows on some intervals.

Ventral side of body with simple punctures changing at lateral parts of meso- and metasternum to small pit-shaped punctures; entire ventral side covered with scales; anal sternite broadly rounded in male, narrowly rounded in females.

Legs dark bronze, small brushes of fine hairs present on the first and second tarsal segments only; claws with distinct tooth at inner margin.

Aedeagus (Plate II, 12, 13) characteristic for *A. virgulata*-group, with short apophysis; ovipositor (Plate II, 16) short, with widely inserted styli.

Length 3.9—5.7 mm; width 1.3—1.8 mm.

Holotype: ♂, Cyprus, Salamis near Famagusta, V. 1973, Veselý leg.; Paratypes: 14 ♂♂, 8 ♀♀ the same data; 2 ♂♂, 1 ♀ the same locality, Prof. A. Pfeffer leg. Holotype deposited in the collection of S. Bílý, paratypes deposited in the collections of R. Veselý, A. Pfeffer and S. Bílý and in the Zoological Institute, Leningrad.

Biology: all specimens collected on flowers of *Cardus* sp.; host plant unknown.

A. pseudovirgulata sp. n. belongs in the large and taxonomically difficult *A. virgulata*-group which may be characterized as follows: elytra yellowish with dark pattern consisting of irregular spots and stripes; abdomen of females without distinct areas of punctures and depressions; claws with tooth on inner margin; head and pronotum with simple punctures.

A. pseudovirgulata sp. n. differs from other East-Mediterranean species of this group by the following key characters:

- 1 (2) Rows of elytral punctures consisting of large, rounded, shallow punctures; diameter of punctures larger than the width of intervals; ovipositor broad, short; Cyprus *A. pseudovirgulata* sp. n.
2 (1) Rows of elytral punctures grooved, consisting of small punctures; width of intervals mostly larger (exceptionally equal) than the diameter of punctures; ovipositor narrow, prolonged *A. virgulata* (ILL.),
A. levantina (OBNB.), *A. tonstrix* (REITER), *A. chrysanthemi* (CHEVR.), *A. klapaleki* (OBNB.).

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OWENBERGER J., 1934: Studien über palaearktische Buprestiden I. *Folia zool. hydrobiol.*, 5: 158—290.

Новые виды грибы Асмаеодерини из Югозападной Азии (Coleoptera, Buprestidae)

Asmaeodera 2 spp. n., *Asmaeoderella* 2 spp. n., таксономия, таблицы для определения

Резюме. Описания четырех новых видов из грибы Асмаеодерини: *Asmaeodera holzschuhi* sp. n. из восточной Турции (группа *A. xanthelytra* Obnb.), *Asmaeodera anatolica* sp. n. из восточной Турции (группа *A. bipunctata* Ol.), *Asmaeoderella nannorrhopsicola* sp. n. из юговосточного Ирана (группа *A. adspersula* Ill.) и *Asmaeoderella pseudovirgulata* sp. n. из Кипра (группа *A. virgulata* Ill.).

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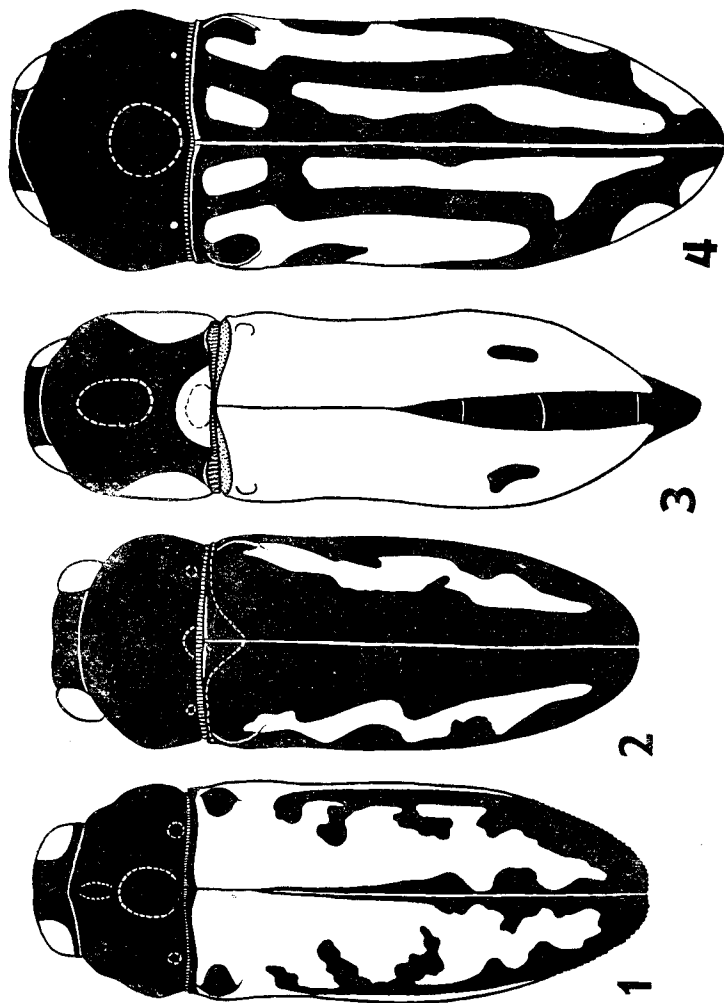


PLATE I, Figs 1—4: 1 — *Acmaeodera holzschuhi* sp. n., holotype, ♂, 7.5 mm; 2 — *Acmaeodera anatolica* sp. n., holotype, ♂, 4.2 mm; 3 — *Acmaeoderella nannorrhopsicola* sp. n., holotype, ♂, 6.0 mm; 4 — *Acmaeoderella pseudovirgulata* sp. n., paratype, ♂, 4.2 mm.

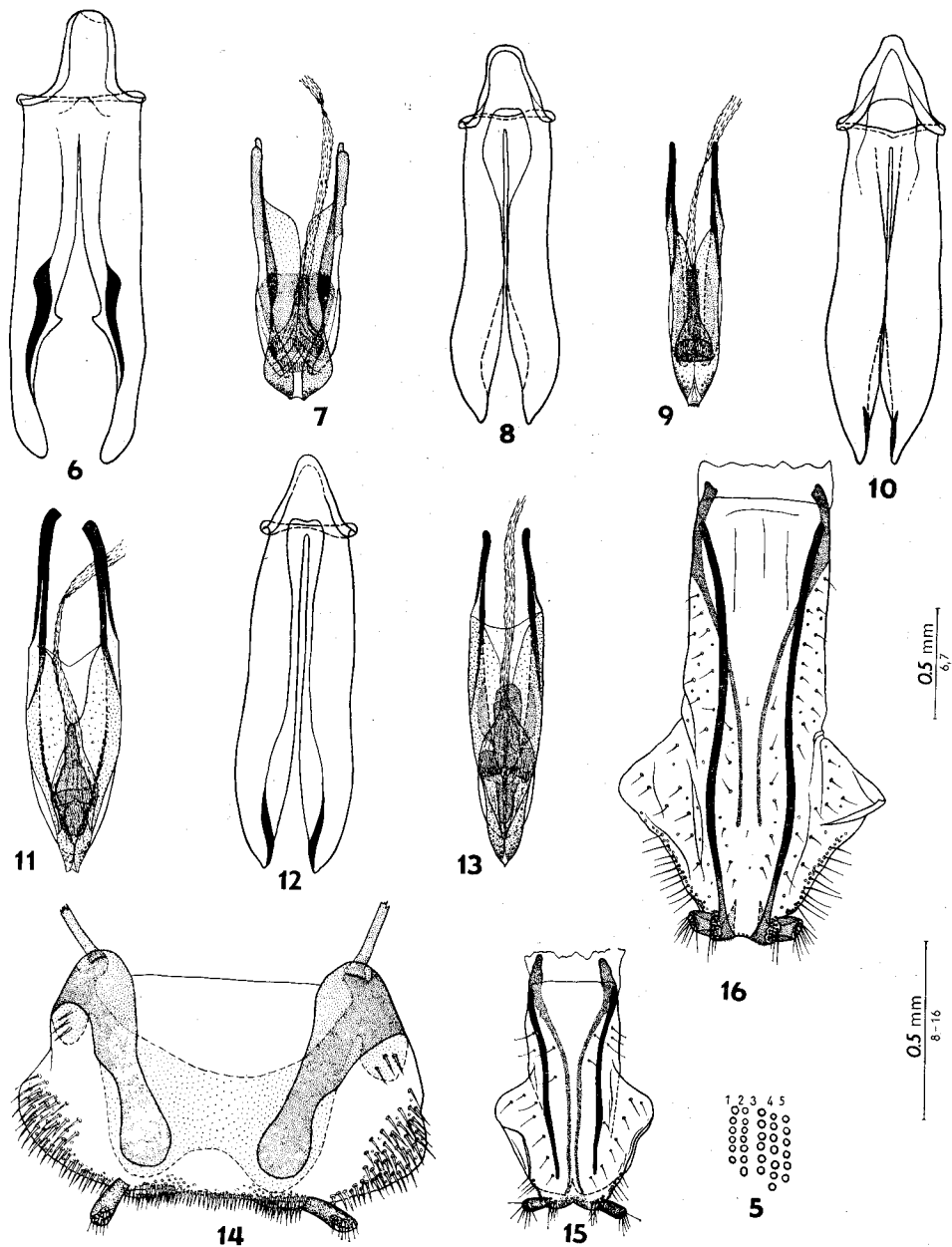


PLATE II, Figs. 5-16: 5 - *Acmaeoderella pseudovirgulata* sp. n., punctuation of elytra; 6 - Parameras of *Acmaeodera holzschuhi* sp. n.; 7 - aedeagus of *A. holzschuhi* sp. n.; 8 - parameras of *A. anatolica* sp. n.; 9 - aedeagus of *A. anatolica* sp. n.; 10 - parameras of *Acmaeoderella nannorrhopsicola* sp. n.; 11 - aedeagus of *A. nannorrhopsicola* sp. n.; 12 - parameras of *A. pseudovirgulata* sp. n.; 14 - ovipositor of *Acmaeodera holzschuhi* sp. n.; 15 - ovipositor of *Acmaeodera anatolica* sp. n.; 16 - ovipositor of *Acmaeoderella pseudovirgulata* sp. n.