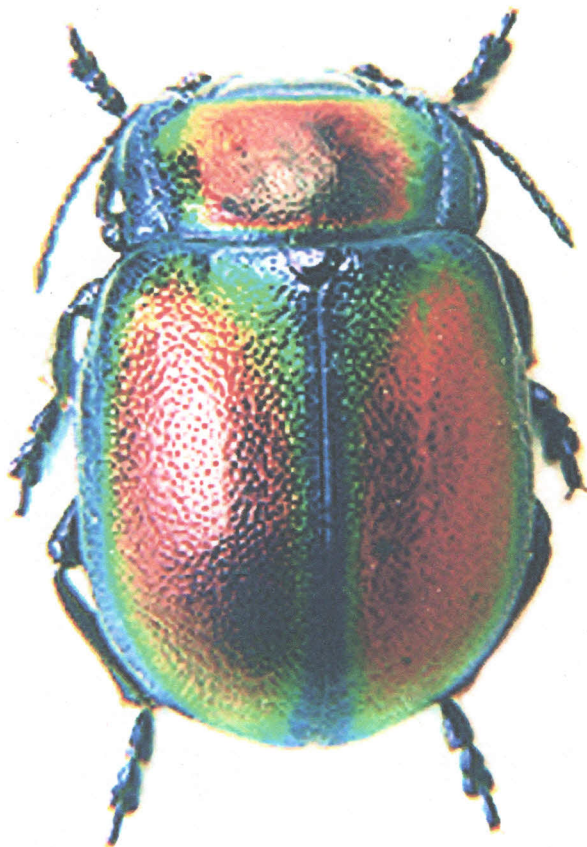


A MONOGRAPH OF THE  
GENUS *CHRYSOLINA*  
MOTSCHULSKY, 1860  
(COLEOPTERA:  
CHRYSOMELIDAE)  
OF THE WORLD. PART 1.

ANDRZEJ O. BIENKOWSKI



Moscow. 2007

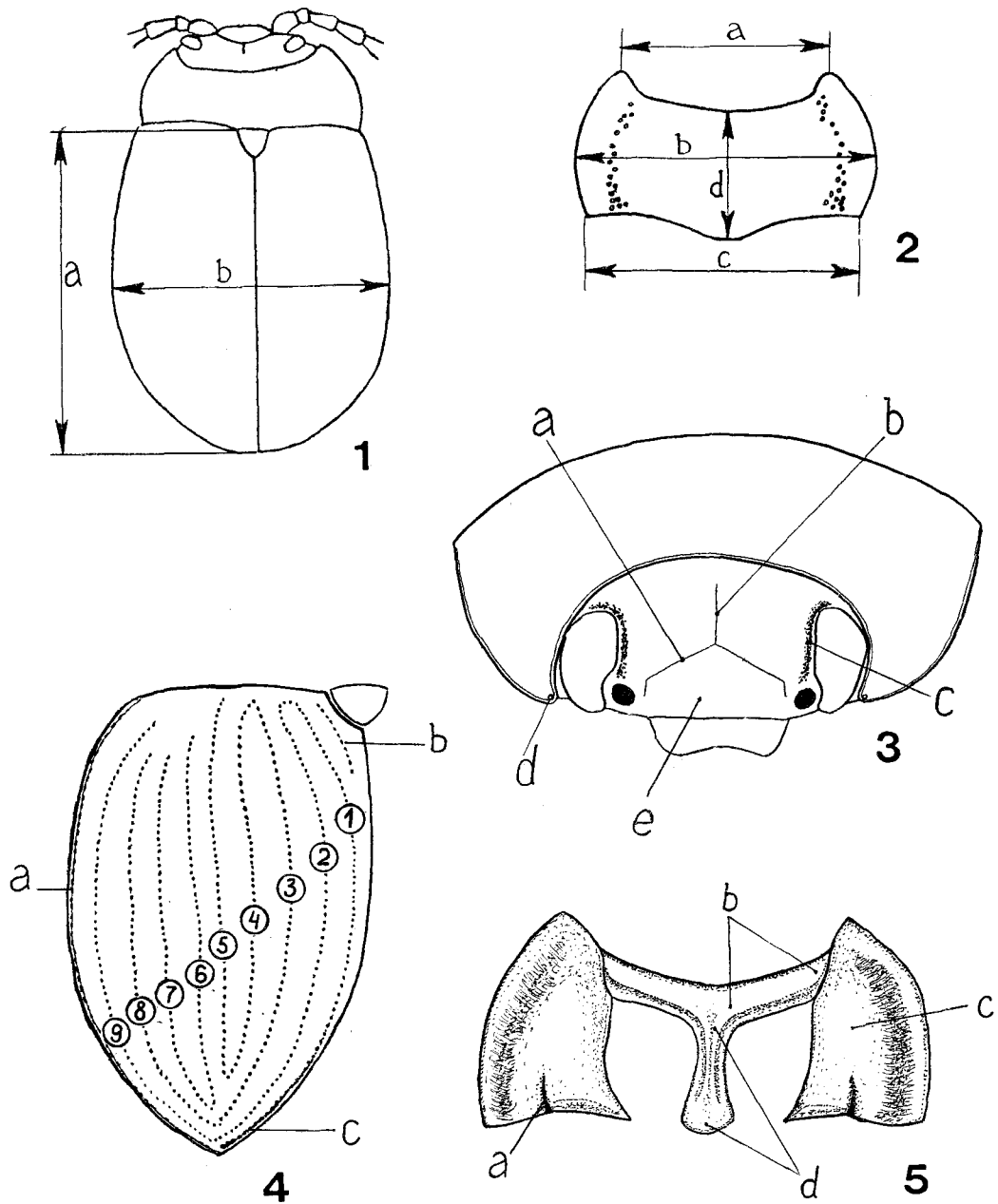


Figure 1: *Chrysolina*, general morphology: 1 — *Ch. sturmi*, dorsal view, measurements: a — elytral length, b — maximal body width; 2 — *Ch. aurichalcea*, pronotum, measurements: a — width between anterior angles, b — maximal width, c — width between posterior angles, d — length; 3 — *Chrysolina*, head and pronotum: a — frontal suture, b — epicranial suture, c — orbital line, d — anterior setiferous pore, e — clypeus; 4 — *Chrysolina*, left elytron: a — marginal stria, b — scutellar puncture row, c — sutural stria, 1–9 — first–ninth puncture rows, respectively; 5 — *Ch. latimargo*, prothorax, ventral view: a — basal fold of hypomeron, b — anterolateral portion of prosternum, c — prothoracic hypomeron, d — intercoxal prosternal process. (Orig.)

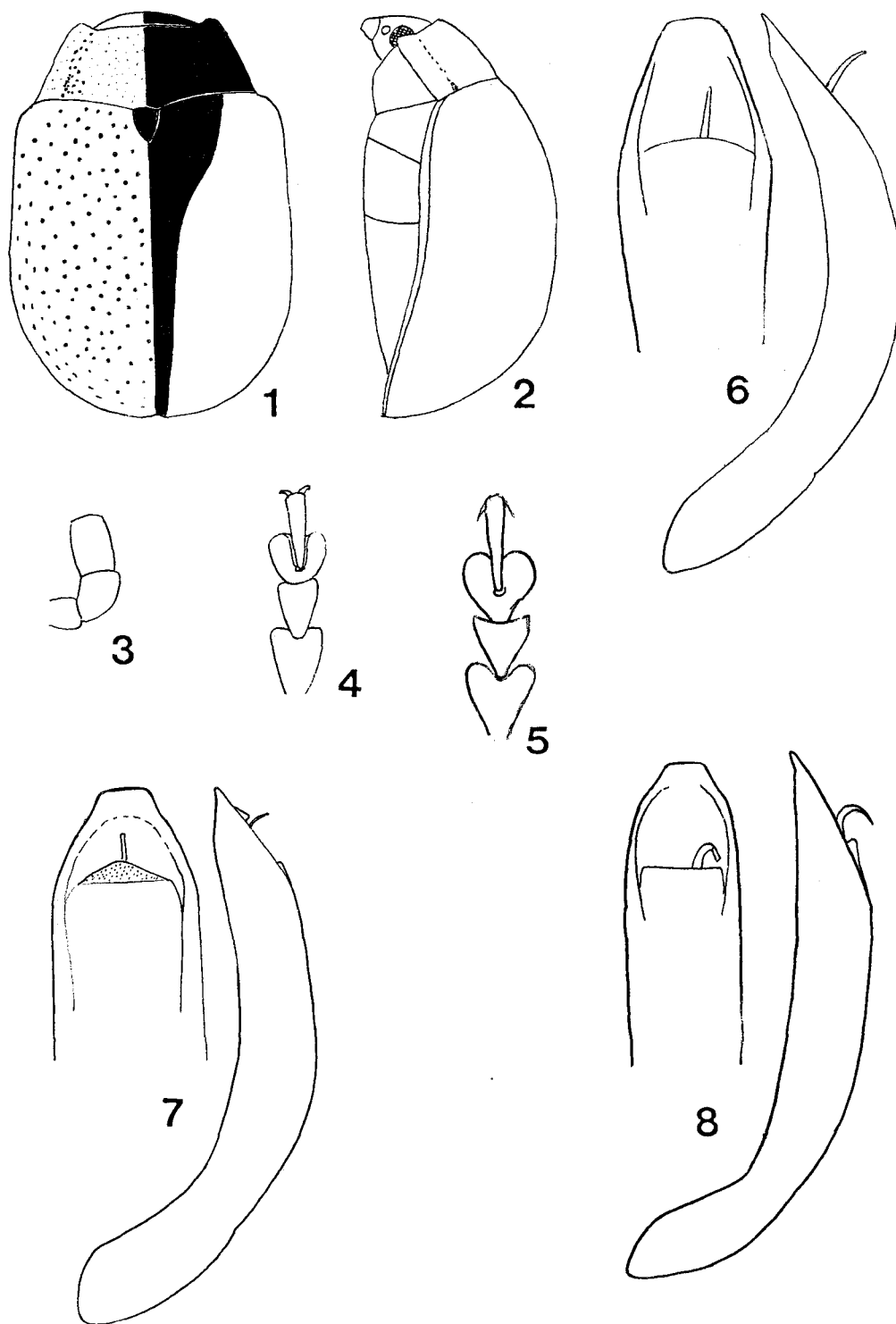


Figure 2: *Chrysolina* (*Allochrysolina*): 1-4 — *Ch. confossa*, female (Algeria): 1 — dorsal view, 2 — lateral view, 3 — maxillary palpus, 4 — fore-tarsus; 5-6 — *Ch. confossa*, male (Algeria): 5 — fore-tarsus, 6 — aedeagus, dorsal and lateral view; 7 — *Ch. fuliginosa galii* (France), aedeagus, dorsal and lateral view; 8 — *Ch. lepida gastonis* (Algeria), aedeagus, dorsal and lateral view. (Orig.)

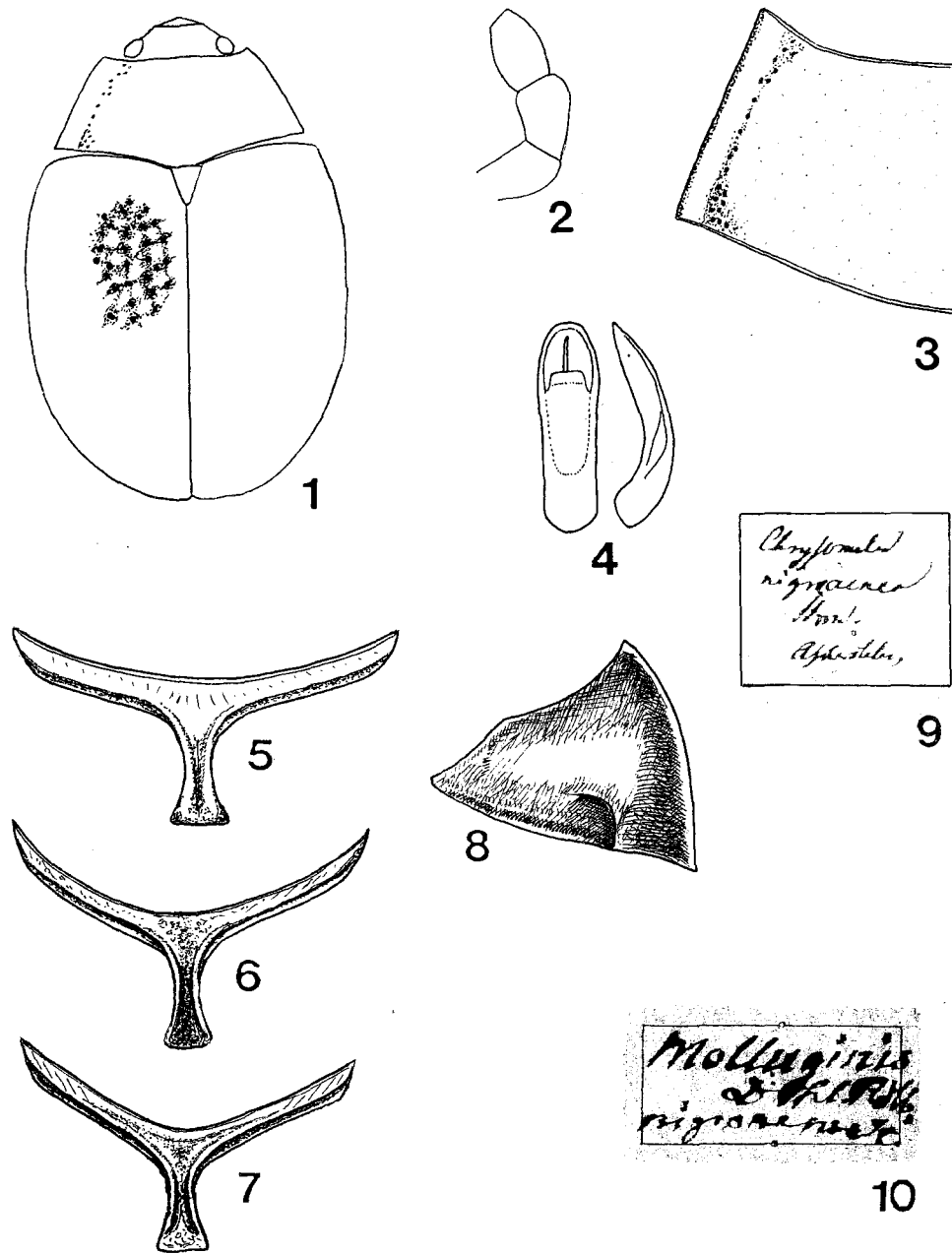


Figure 3: *Chrysolina* (*Allochrysolina*): 1-4 — *Ch. opacicollis*: 1-3 — female (Morocco: Ifrane): 1 — dorsal view, 2 — maxillary palpus, 3 — pronotum, dorsal view, 4 — male, lectotype (Morocco: Rif), aedeagus, dorsal and lateral view; 5-7 — prothoracum: 5 — *Ch. confossa*, male, 6 — *Ch. fuliginosa galii*, female, 7 — *Ch. lepida lepida*, female; 8 — *Ch. confossa*, male, prothoracic hypomera; 9-10 — original labels of the syntype of *Chrysolina molluginis* Suffrian. (4 — after Bourdonné, Doguet, 1991; others — orig.)

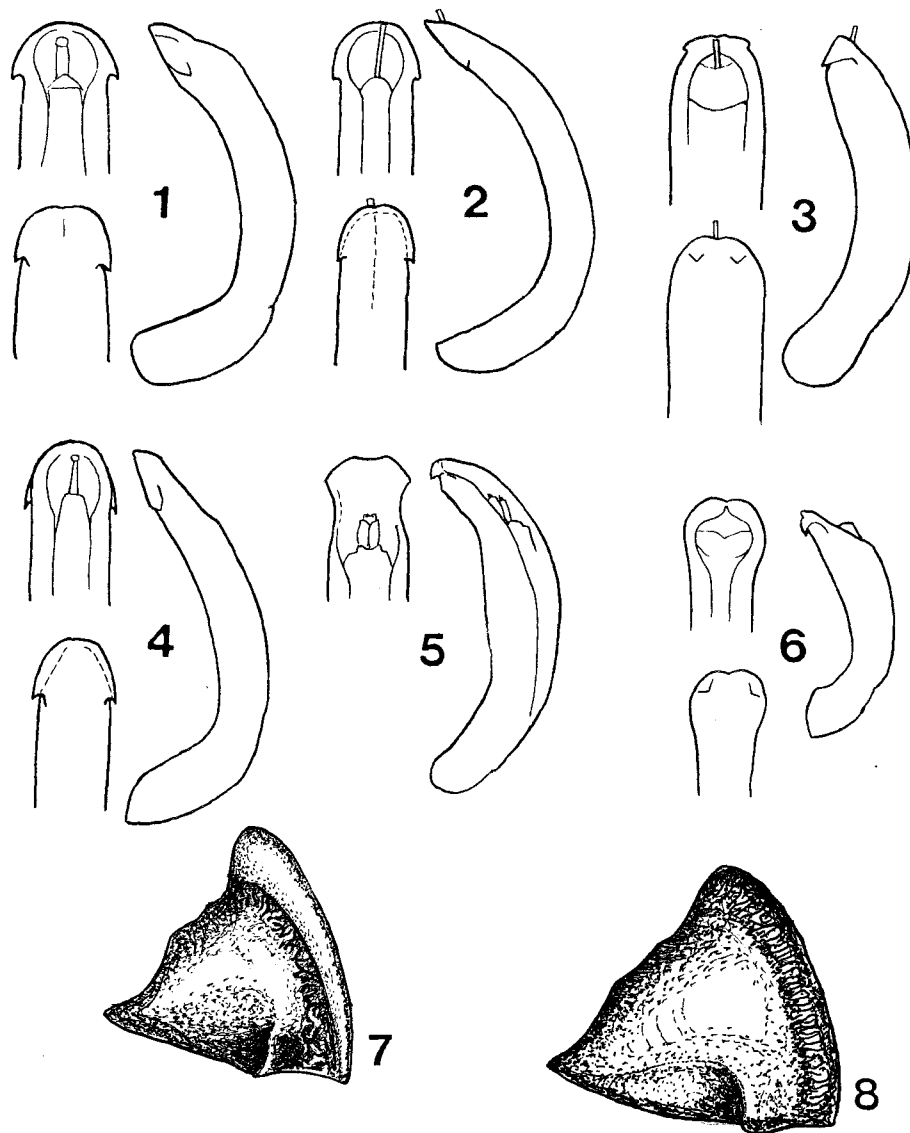


Figure 4: *Chrysolina* (*Allohypericia*): 1-6 — aedeagus: 1 — *Ch. auripennis auripennis* (New Mexico), 2 — *Ch. auripennis schaefferi* (Arizona), 3 — *Ch. aeruginosa alpina* (Mongolia: Baian-Khongor Aimak), 4 — *Ch. basilaris* (California), 5 — *Ch. cribraria*, 6 — *Ch. koltzei koltzei* (Irkutsk reg.); 7-8 — prothoracic hypomera: 7 — *Ch. aeruginosa aeruginosa*, female, 8 — *Ch. perforata perforata*, female. (5 — after Jolivet, 1992; others — orig.)

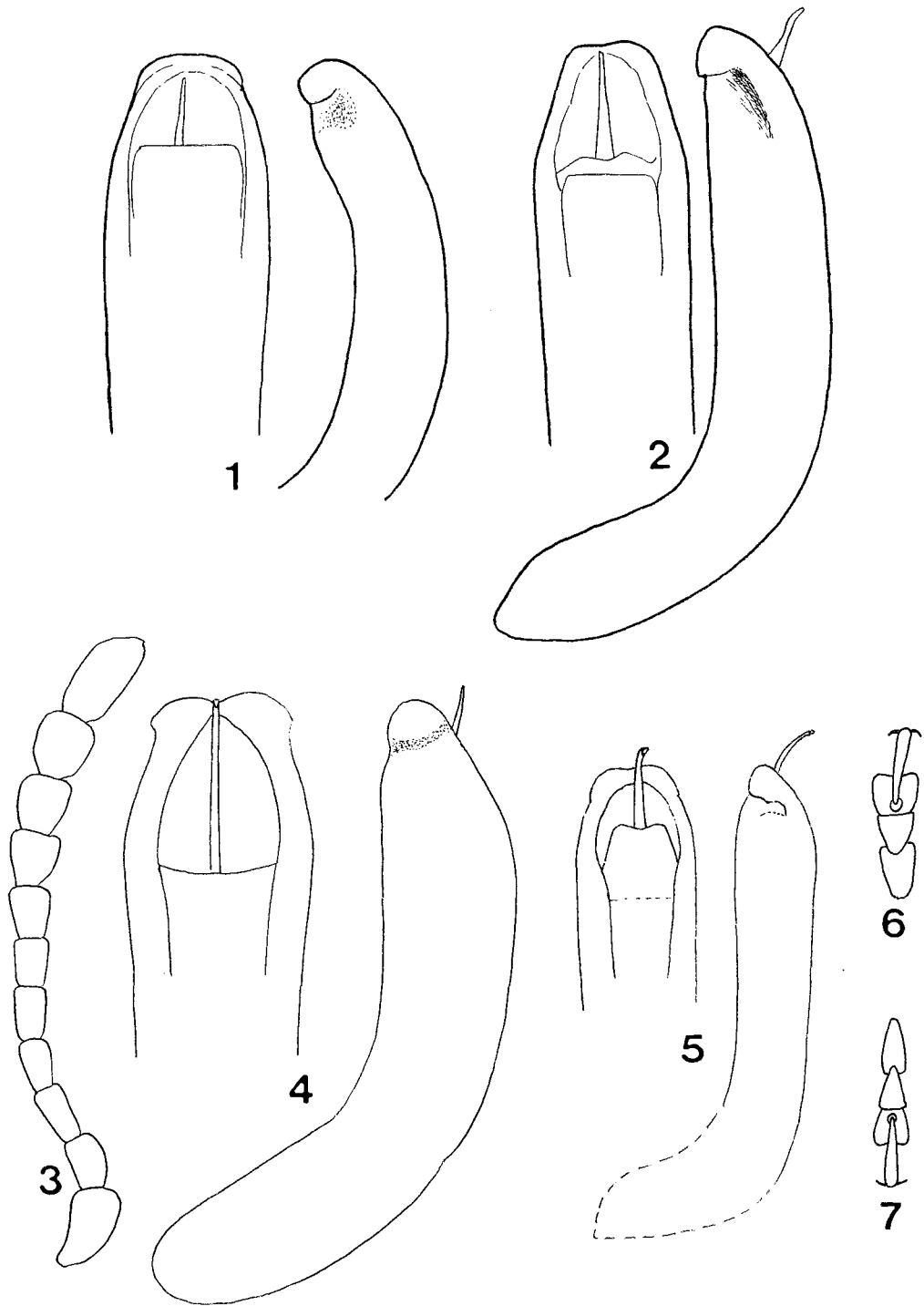


Figure 5: *Chrysolina* (*Allohypericia*): 1 — *Ch. aeruginosa aeruginosa* (*Taeniosticha instructa*, syntype, Dauria), aedeagus, dorsal and lateral view; 2 — *Ch. peninsularis* (China: Shaanxi), aedeagus, dorsal and lateral view; 3-4 — *Ch. arctica*, male (Wrangel Isl.): 3 — antenna, 4 — aedeagus, dorsal and lateral view; 5-7 — *Ch. peninsularis*, male (Primorski Krai: Khanka lake): 5 — aedeagus, dorsal and lateral view, 6 — fore-tarsus, 7 — hind-tarsus. (Orig.)

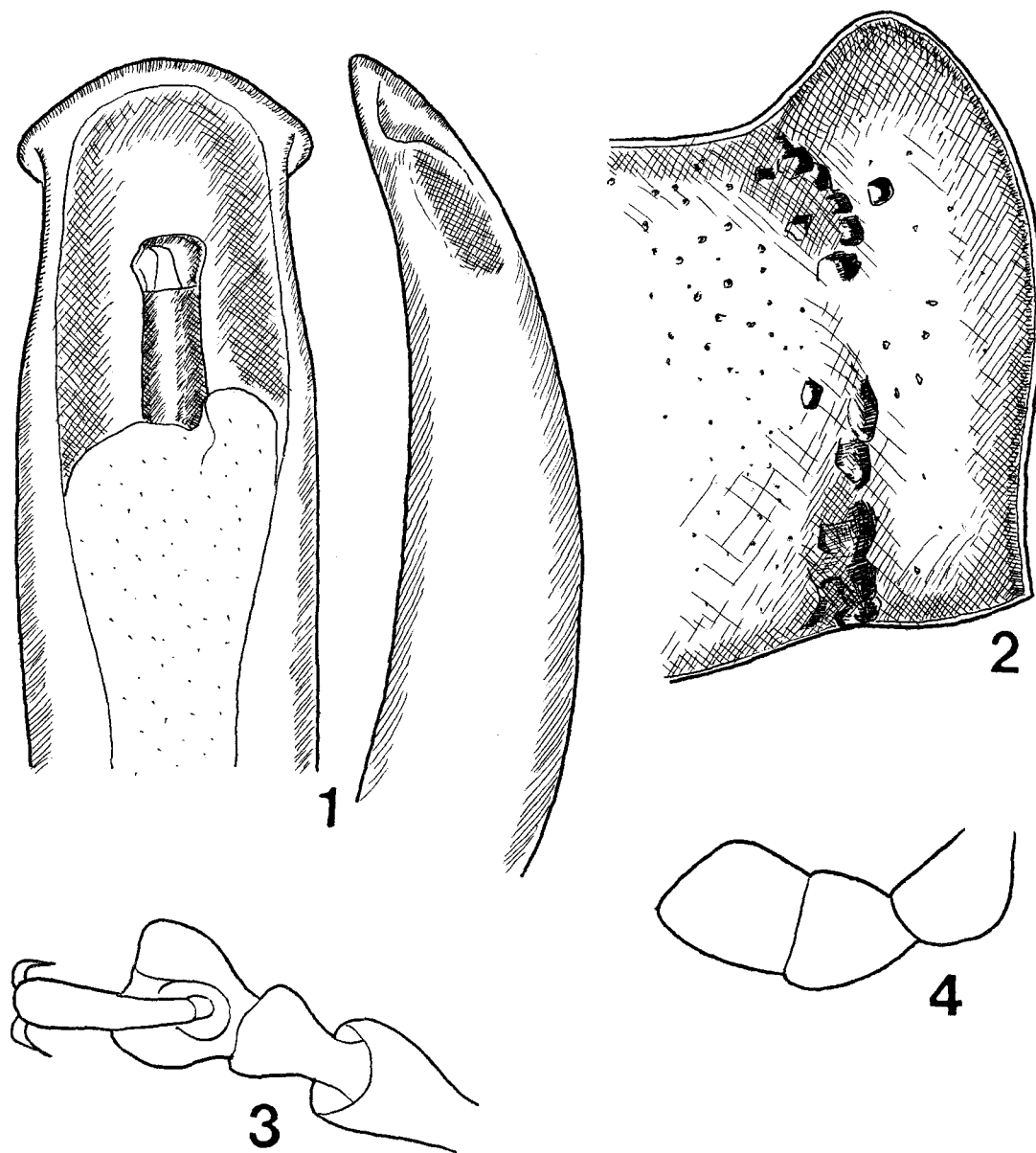


Figure 6: *Chrysolina (Allohypericia) inornata*, male: 1 — aedeagus, dorsal and lateral view, 2 — pronotum, dorsal view, 3 — fore-tarsus, 4 — maxillary palpus. (Orig.)

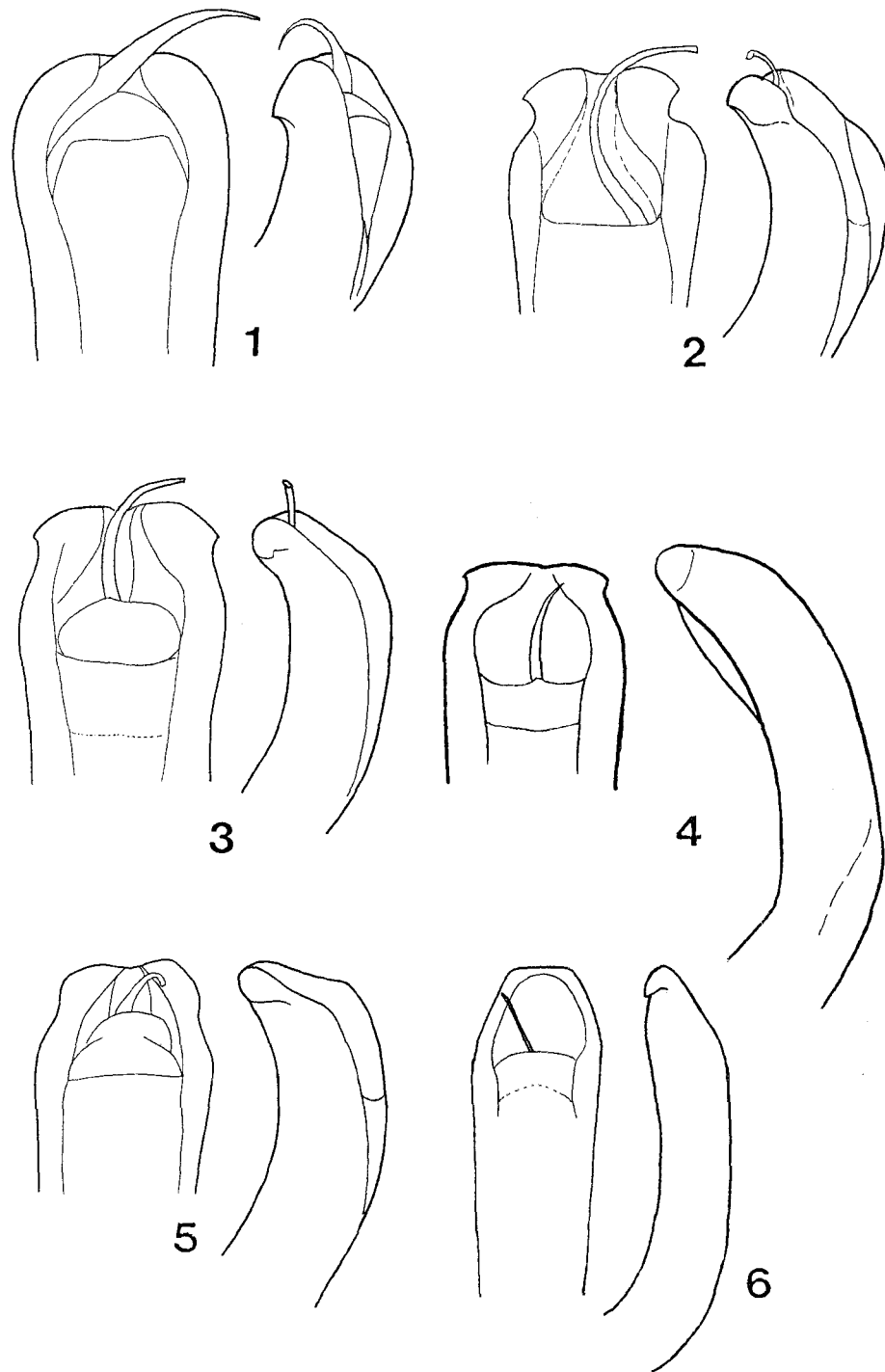


Figure 7: *Chrysolina* (*Allohypericia*), aedeagus, dorsal and lateral view: 1 — *Ch. perforata perforata* (Irkutsk), 2 — *Ch. perforata simillima* (*Ch. perforata changaiensis*, holotype, Mongolia: Khangai), 3 — *Ch. perforata simillima* (*Ch. perforata pallidipes*, paratype, Mongolia: Ubsu Nur Aimak), 4 — *Ch. purpurata* (Krasnoyarsk), 5 — *Ch. perforata turczaninoffi* (*Chrysomela variolosa*, lectotype), 6 — *Ch. centralasiae* (Mongolia: South Gobi Aimak). (Orig.)



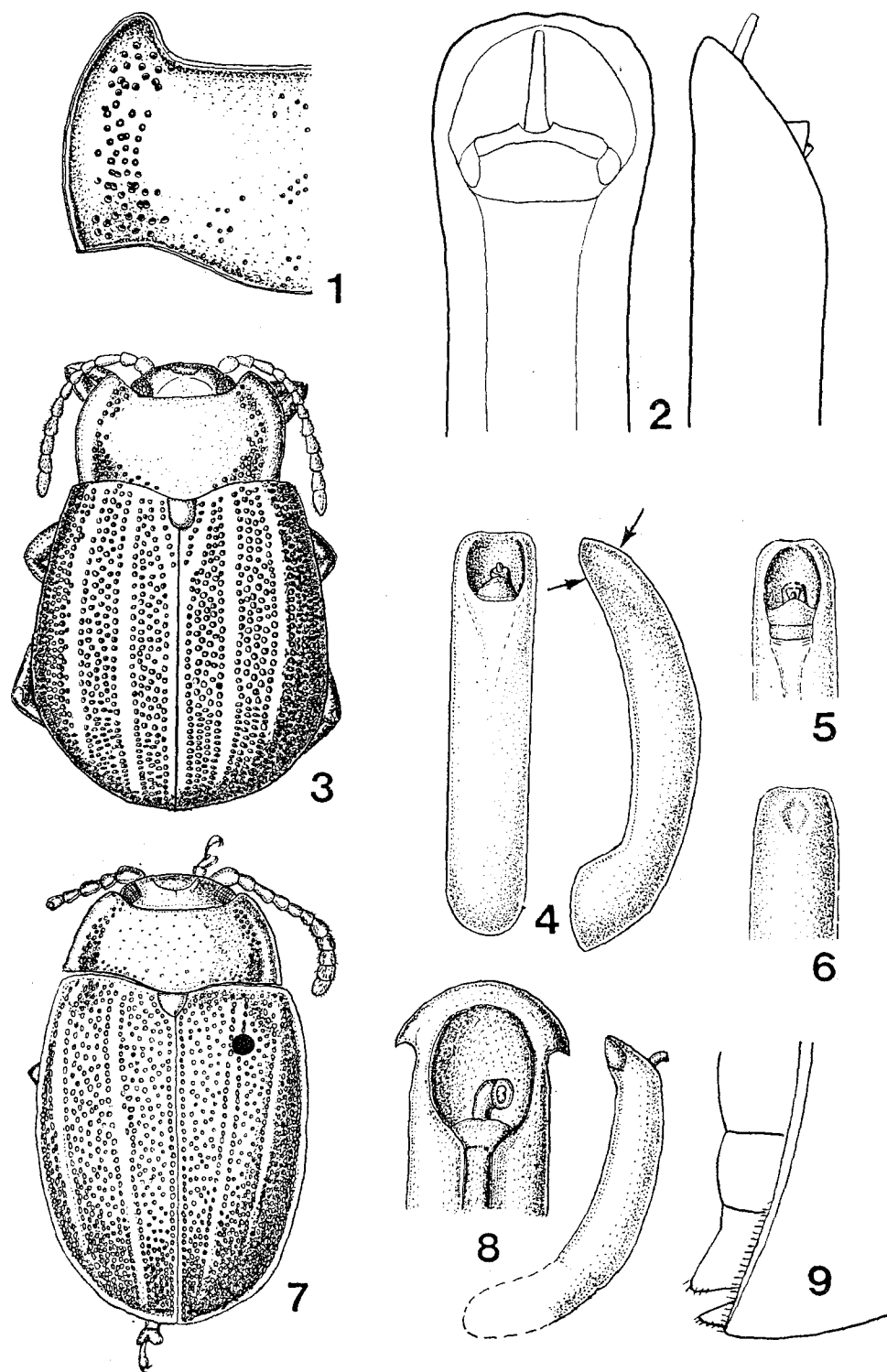


Figure 8: *Chrysolina* (*Anopachys*): 1-2 — *Ch. gansenensis*, male (lectotype, Korea): 1 — pronotum, dorsal view, 2 — aedeagus, dorsal and lateral view; 3-6 — *Ch. relucens* (White Sea shore): 3 — female, dorsal view, 4-6 — male, aedeagus: 4 — dorsal and lateral view, 5 — apex, dorsal view, 6 — apex, ventral view; 7-9 — *Ch. schatzmayri*: 7-8 — male (lectotype, Gulf of Venice: Grado Isl.): 7 — dorsal view, 8 — aedeagus, dorsal and lateral view, 9 — female (paralectotype, Grado Isl.), apex of abdomen and elytron, lateral view. (Orig.)

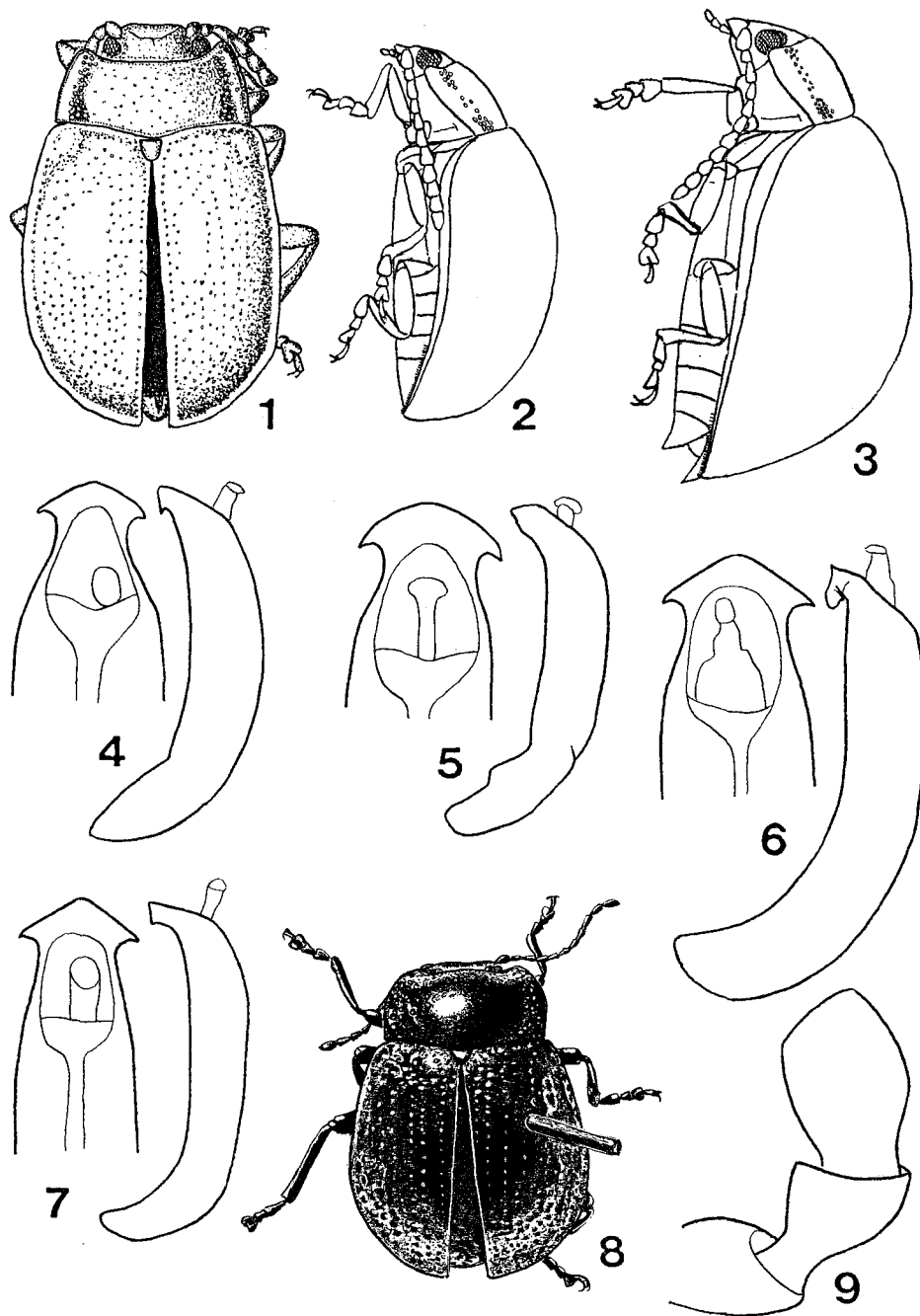


Figure 9: *Chrysolina* (*Anopachys*): 1-4 — *Ch. aurichalcea*: 1-2 — male, dorsal and lateral view (*Ch. aurichalcea omisiensis*, lectotype, China: Sichuan), 3 — female, lateral view (*Ch. aurichalcea kwanghsiensis*, paralectotype, China: Sichuan), 4 — male, aedeagus, dorsal and lateral view (Gorno-Altai Autonomous Region); 5 — *Ch. quadrangulata*, aedeagus, dorsal and lateral view (paralectotype, Dauria); 6 — *Ch. asclepiadis asclepiadis*, aedeagus, dorsal and lateral view (Switzerland: Simplon); 7 — *Ch. asclepiadis bohemica*, aedeagus, dorsal and lateral view (Ukraine); 8-9 — *Ch. stalii*, female (syntype, China): 8 — dorsal view, 9 — maxillary palpus. (Orig.)

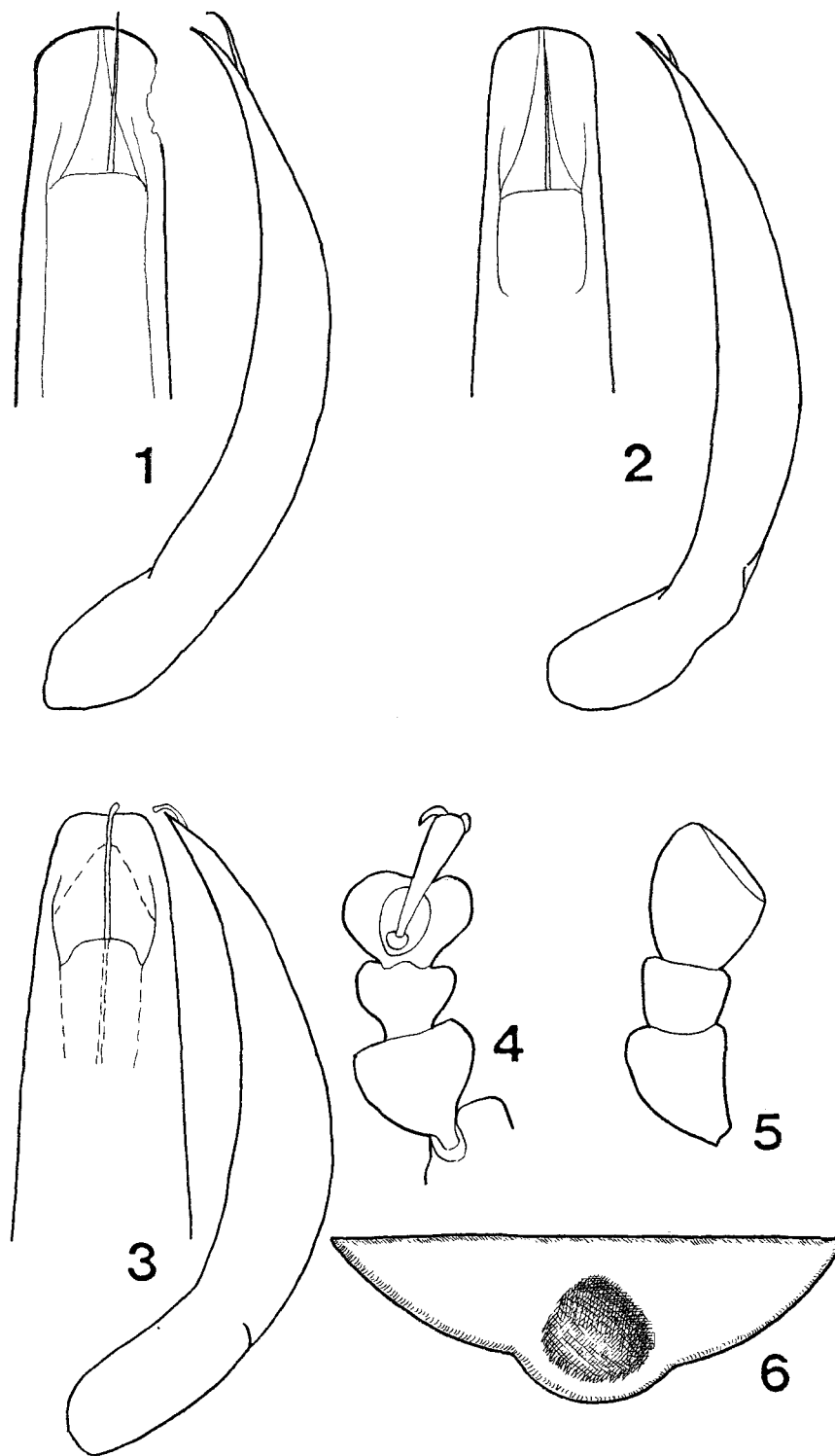


Figure 10: *Chrysolina (Anopachys) eurina*: 1 — syntype *Chrysolina eurina*, aedeagus, dorsal and lateral view (Rumania: Bihor); 2 — syntype *Chrysolina perplexa*, aedeagus, dorsal and lateral view (Austria: Klosterneuburg); 3-6 — male (Russia: Moscow reg.): 3 — aedeagus, dorsal and lateral view, 4 — fore-tarsus, 5 — maxillary palpus, 6 — last abdominal sternite. (Orig.)

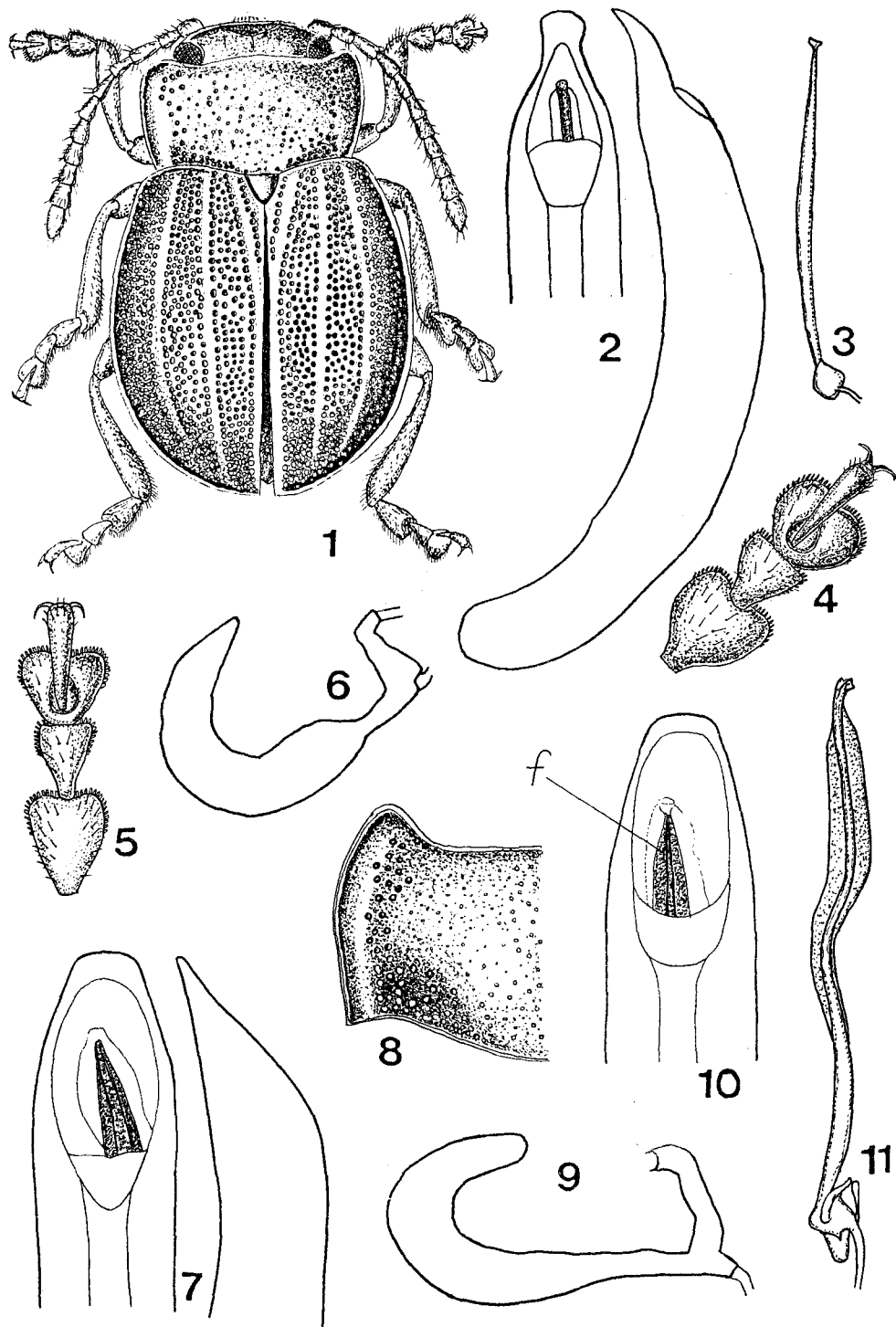


Figure 11: *Chrysolina* (*Anopachys*): 1-6 — *Ch. neglecta*: 1, 2, 4 — male (holotype, Khabarovsk Krai: Khekhtsyur ridge): 1 — dorsal view, 2 — aedeagus, dorsal and lateral view, 4 — fore-tarsus; 3 — male, flagellum (Khabarovsk envir.), 5, 6 — female (paratype, Khabarovsk Krai: Khekhtsyur ridge): 5 — fore-tarsus, 6 — spermatheca; 7-11 — *Ch. lineigera*: 7 — aedeagus, dorsal and lateral view (lectotype, Chita reg.), 8 — male, pronotum, dorsal view (lectotype), 9 — female, spermatheca (Khabarovsk Krai: Khekhtsyur ridge), 10, 11 — male (Khabarovsk Krai: Sikhote Alin): 10 — aedeagus, dorsal view (f — flagellum), 11 — flagellum. (Orig.)

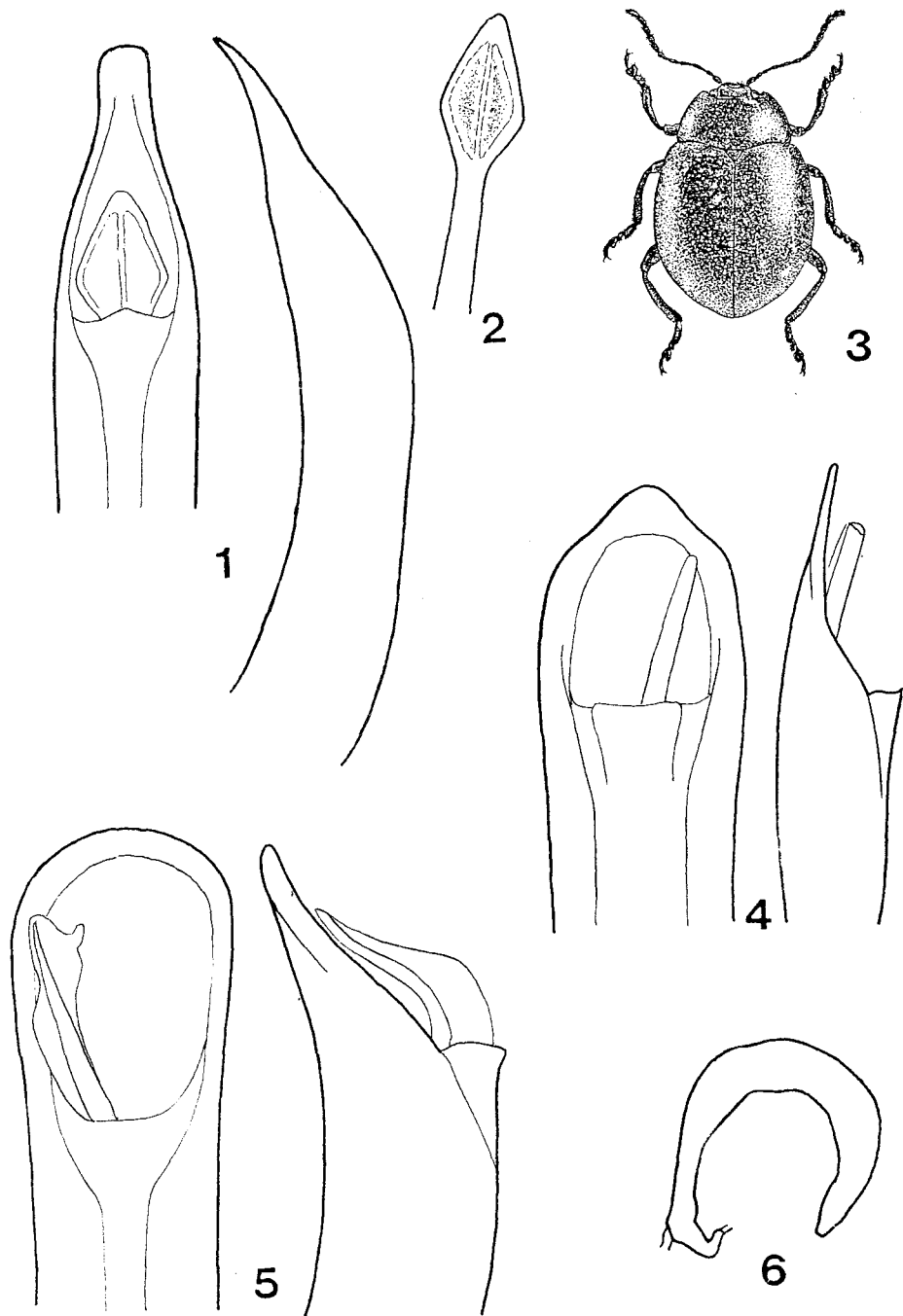


Figure 12: *Chrysolina (Anopachys)*: 1-3 — *Ch. koreana*: 1 — aedeagus, dorsal and lateral view, 2 — flagellum of aedeagus, 3 — dorsal view; 4 — *Ch. pala*, aedeagus, dorsal and lateral view (holotype, Primorski Krai: Khanka lake); 5-6 — *Ch. lineella*: 5 — aedeagus, dorsal and lateral view (Primorski Krai), 6 — spermatheca (Khabarovsk Krai: Khekhtsyr ridge). (3 — after Chûjô, 1941; others — orig.)

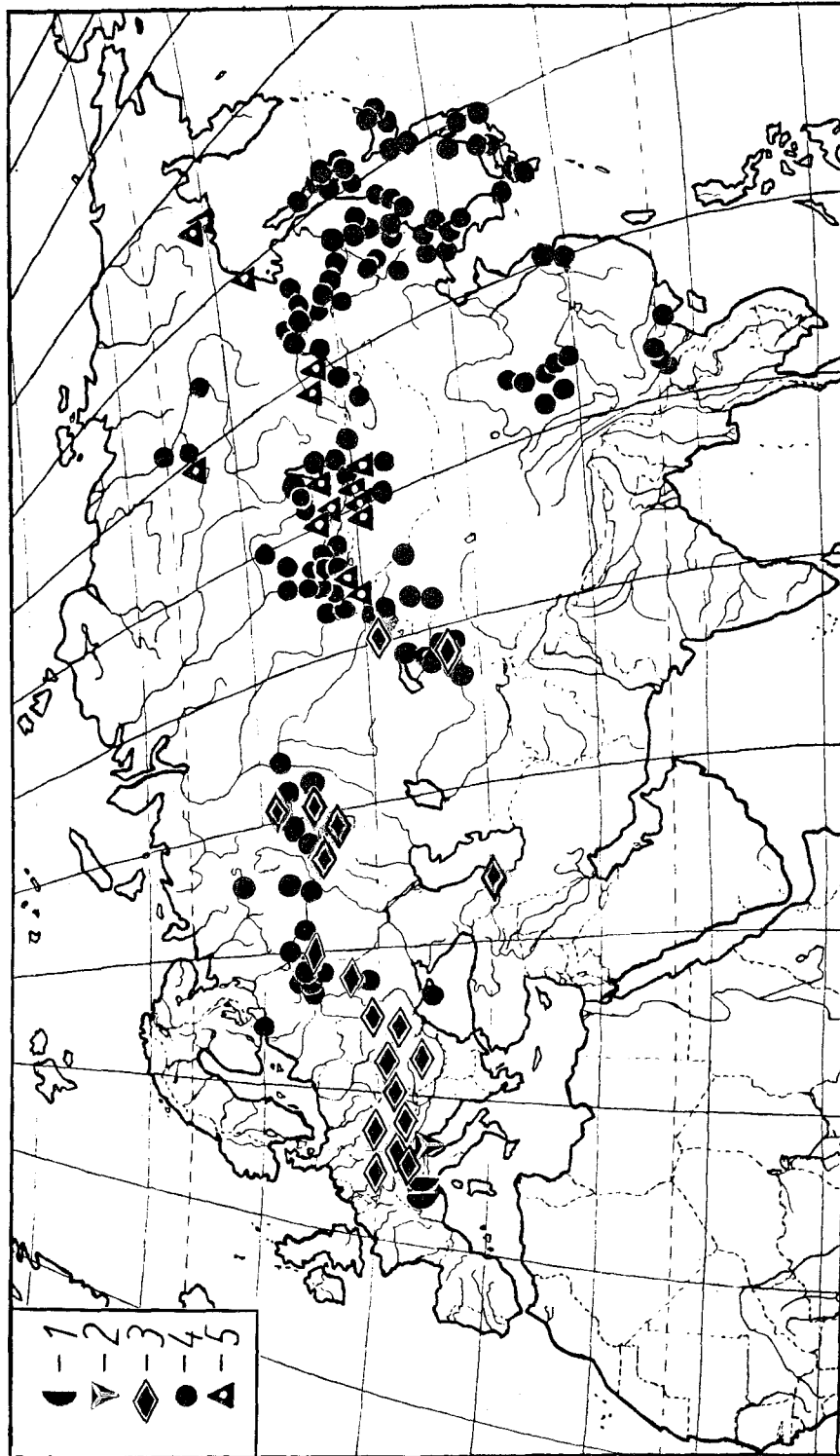


Figure 13: *Chrysolina* (*Anopachys*), distribution: 1 — *Ch. asclepiadis asclepiadis*, 2 — *Ch. schatzmayri*, 3 — *Ch. asclepiadis bohémica*, 4 — *Ch. aurichalcea*, 5 — *Ch. quadrangulata*. (Orig.)

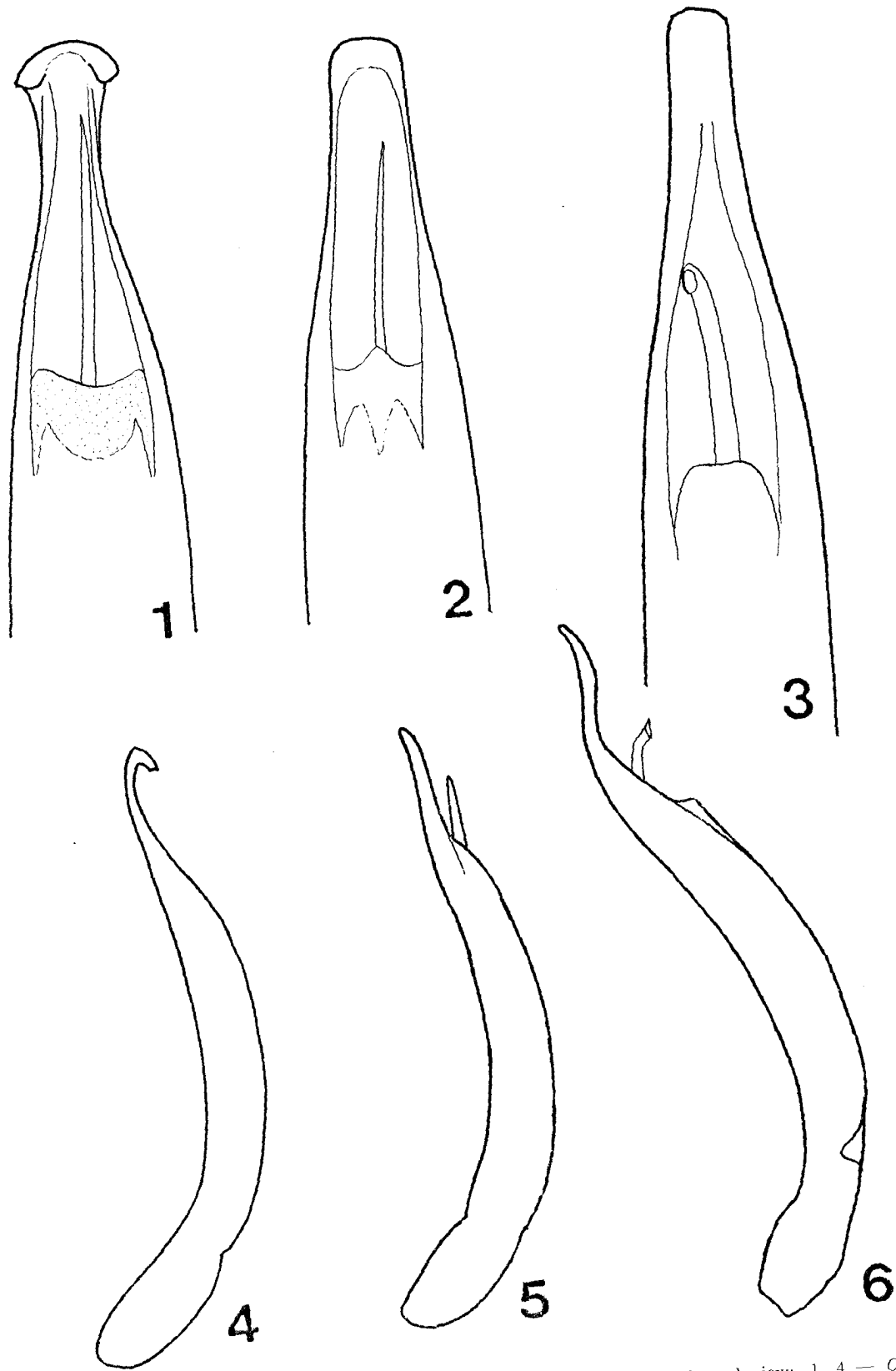


Figure 14: *Chrysolina* (*Apterosoma*), aedeagus, dorsal and lateral view: 1, 4 — *Ch. porosirensis* (Kunashiri Isl.), 2, 5 — *Ch. aino* (Hokkaido Isl.), 3, 6 — *Ch. angusticollis* (Hokkaido Isl.). (Orig.)

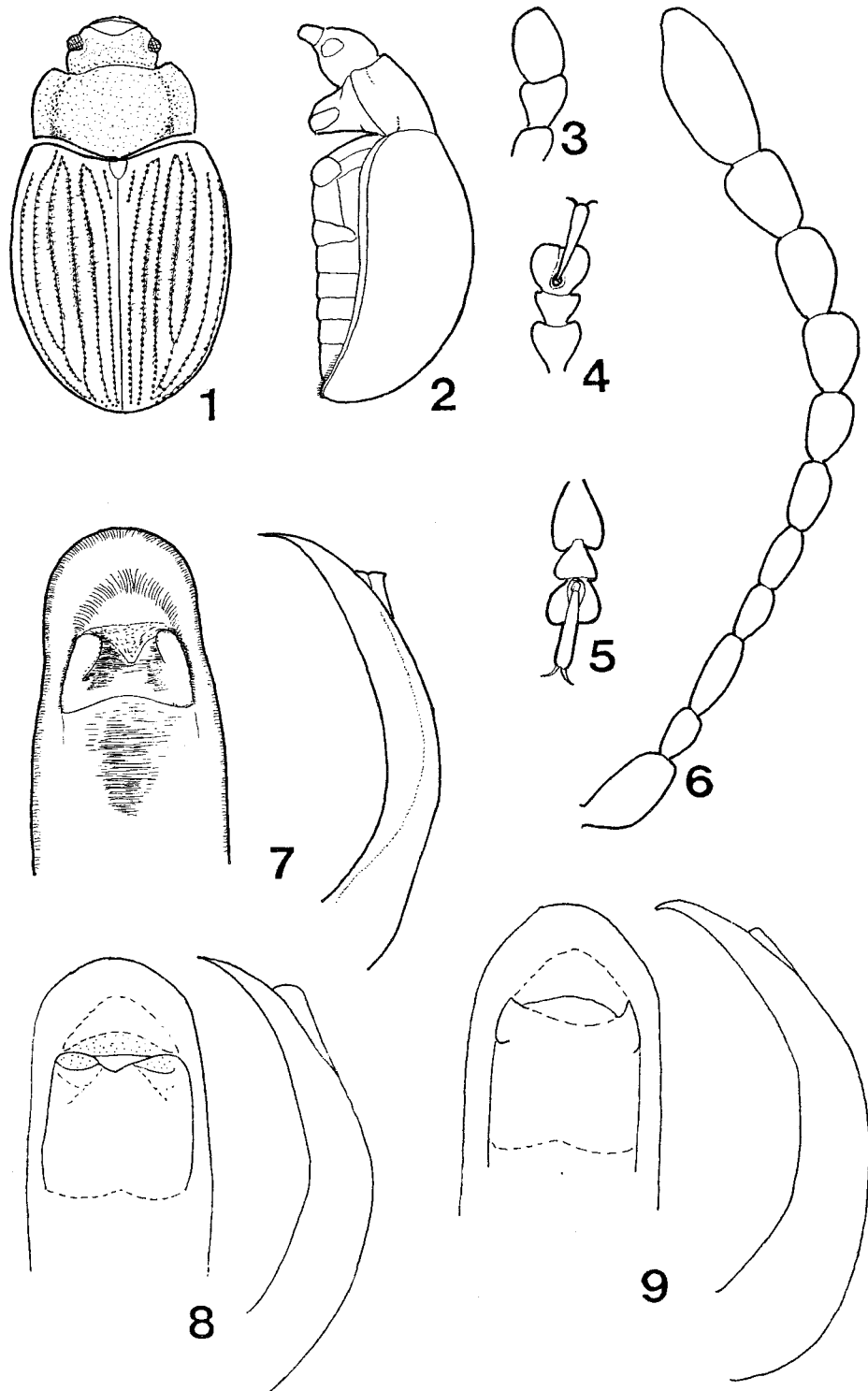


Figure 15: *Chrysolina* (*Arctolina*): 1-7 — *Ch. boreosinica*, male (holotype, China: Sinkiang): 1, 2 — dorsal and lateral view, 3 — maxillary palpus, 4 — fore-tarsus, 5 — hind-tarsus, 6 — antenna, 7 — aedeagus, dorsal and lateral view; 8 — *Ch. borochoensis* (*Ch. naratica*, male, holotype, China: Xinjiang), aedeagus; 9 — *Ch. borochoensis*, male (paratype, China: Xinjiang), aedeagus. (Orig.)



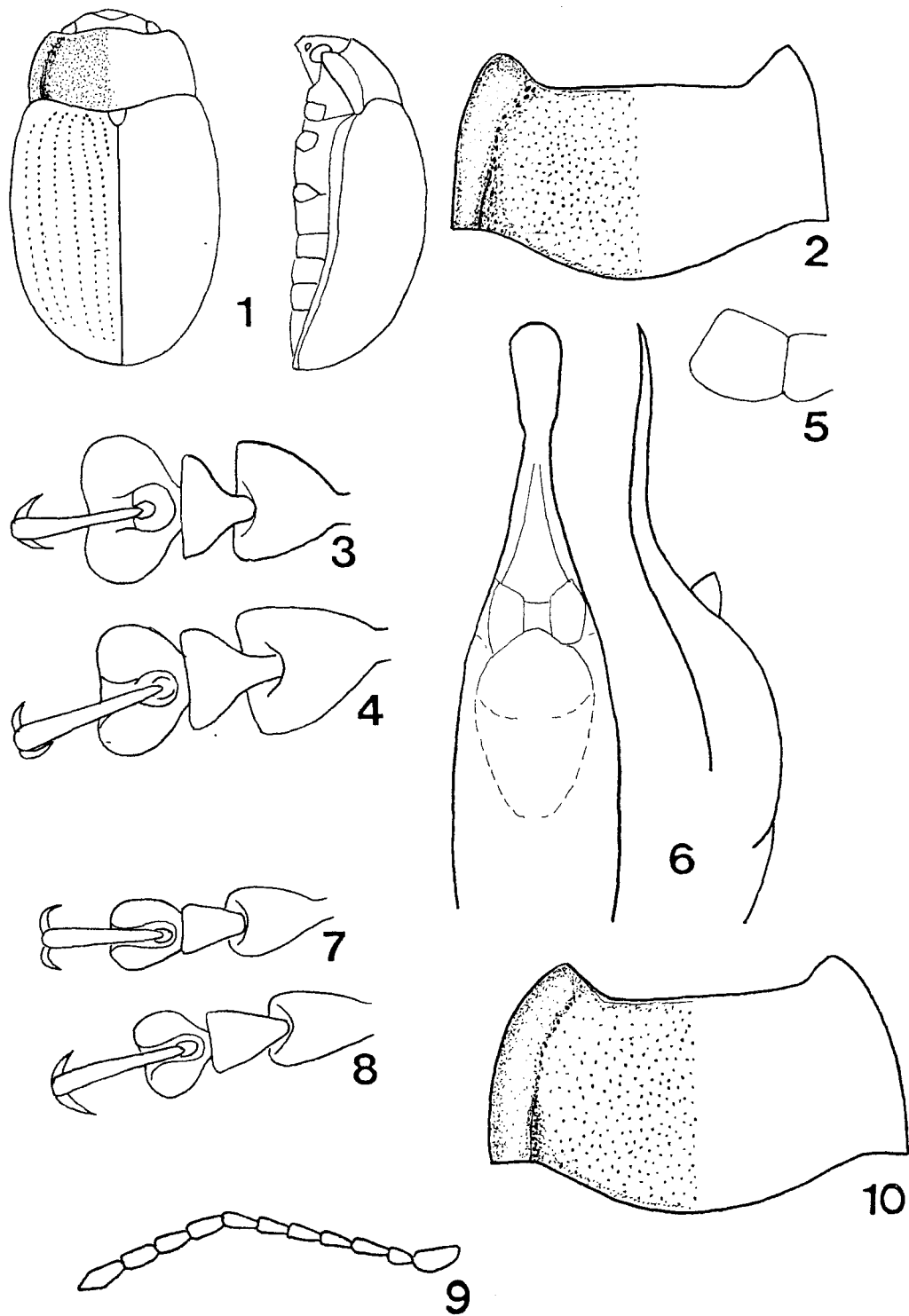


Figure 16: *Chrysolina (Arctolina) dolini*: 1-6 — male (holotype, S.-E. Kazakhstan: Dzhungarian Ala Tau): 1 — dorsal and lateral view, 2 — pronotum, 3 — fore-tarsus, 4 — hind-tarsus, 5 — maxillary palpus, 6 — aedeagus, dorsal and lateral view; 7-10 — female (paratype, S.-E. Kazakhstan: Dzhungarian Ala Tau): 7 — fore-tarsus, 8 — hind-tarsus, 9 — antenna, 10 — pronotum. (Orig.)

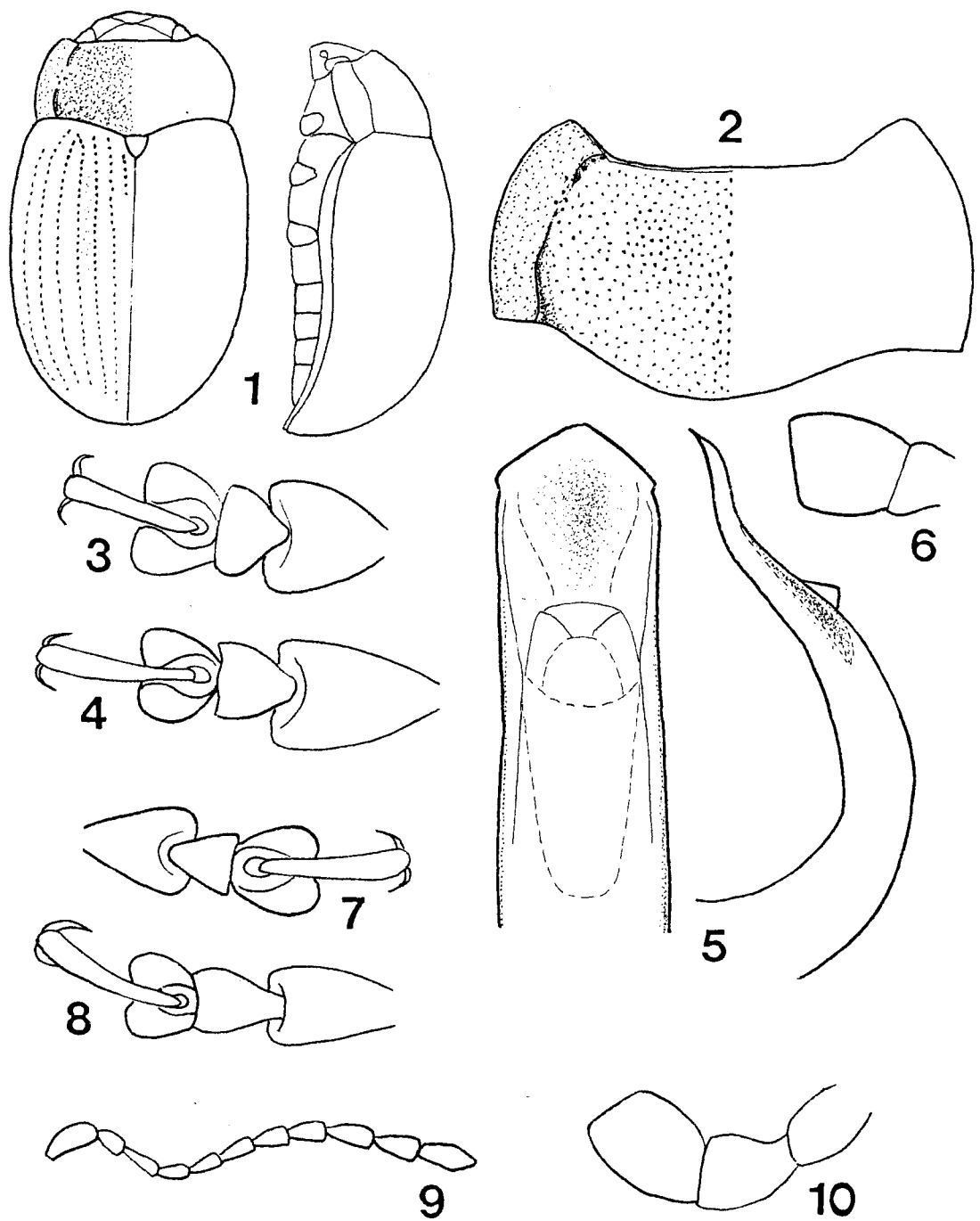


Figure 17: *Chrysolina (Arctolina) kaikana*: 1-6 — male (holotype, S.-E. Kazakhstan: Dzhungarian Ala Tau): 1 — dorsal and lateral view, 2 — pronotum, 3 — fore-tarsus, 4 — hind-tarsus, 5 — aedeagus, dorsal and lateral view, 6 — maxillary palpus; 7-10 — female (paratype, S.-E. Kazakhstan: Dzhungarian Ala Tau): 7 — fore-tarsus, 8 — hind-tarsus, 9 — antenna, 10 — maxillary palpus. (Orig.)

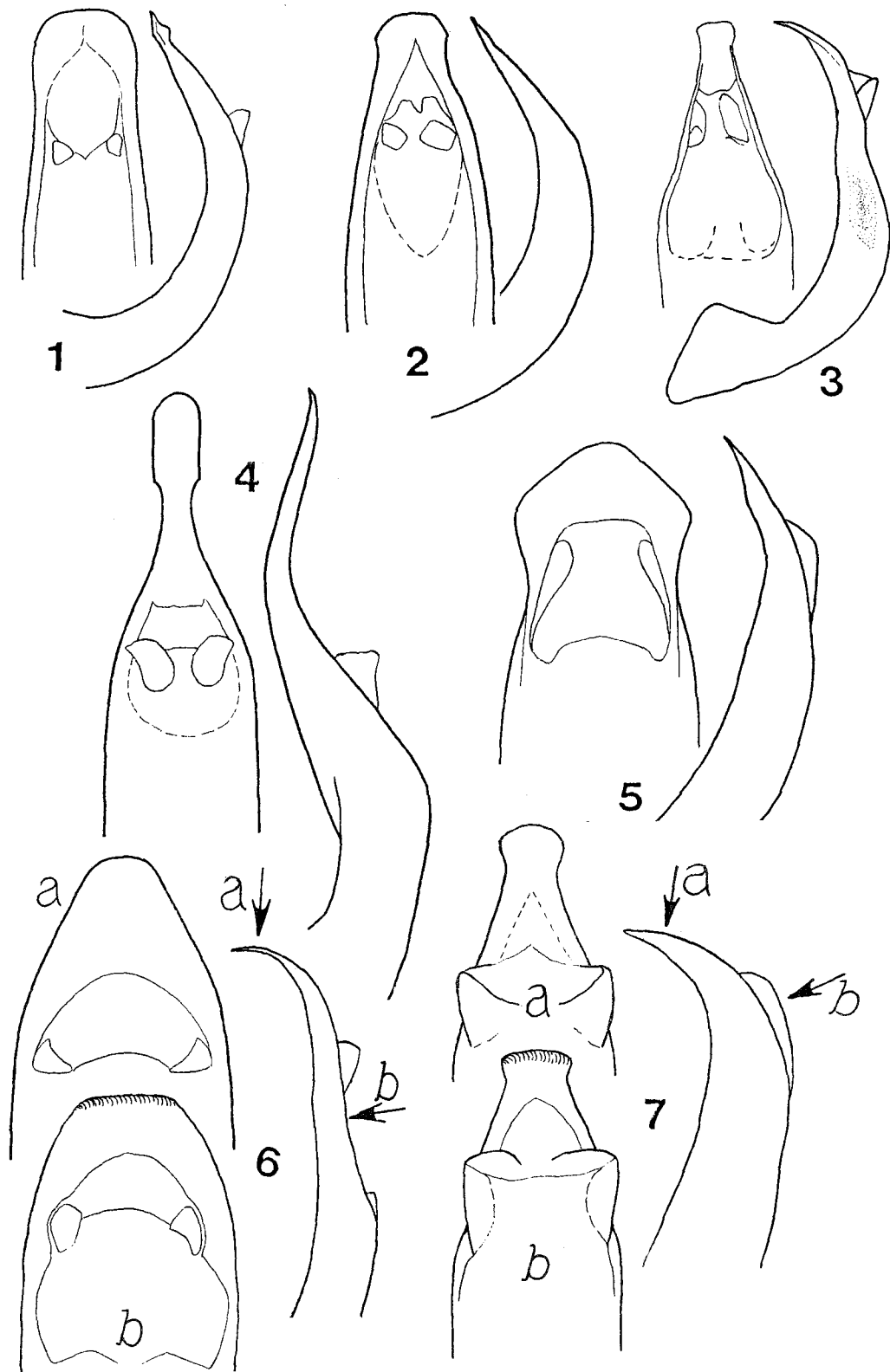


Figure 18: *Chrysolina* (*Arctolina*), aedeagus, dorsal and lateral view: 1 — *Ch. kryzhanovskii* (S.-E. Kazakhstan: Dzhungarian Ala Tau), 2 — *Ch. tastavica* (S.-E. Kazakhstan: Dzhungarian Ala Tau), 3 — *Ch. valichanovi* (S.-E. Kazakhstan), 4 — *Ch. ballioni* ("Ala-Tau"), 5 — *Ch. oiroti* (holotype, Altai), 6 — *Ch. cyanella* (Altai), 7 — *Ch. saurica* (lectotype, E. Kazakhstan). (Orig.)

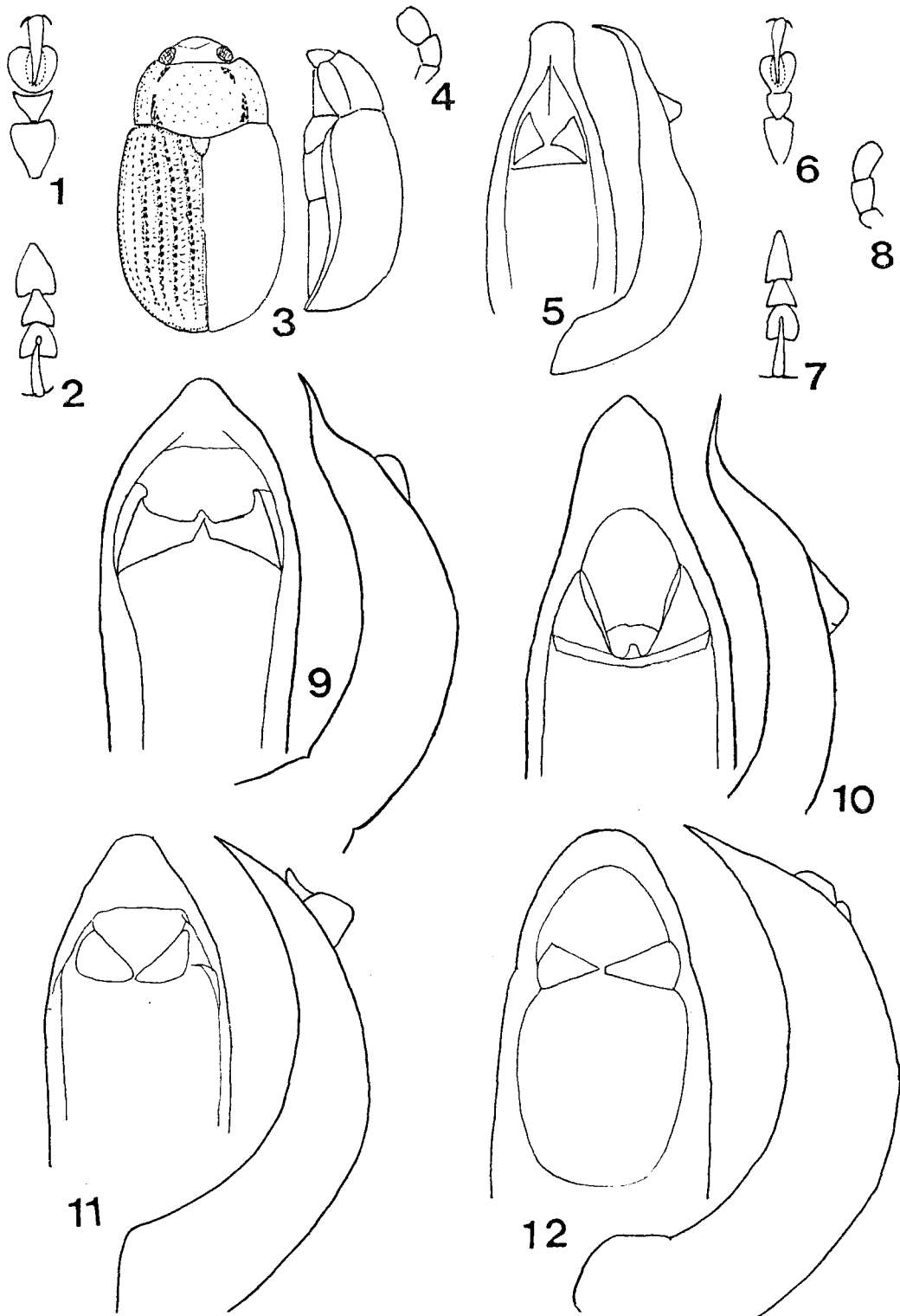


Figure 19: *Chrysolina* (*Arctolina*): 1-8 — *Ch. octocosta* (Kazakhstan: Sarkand): 1-5 — male: 1 — fore-tarsus, 2 — hind-tarsus, 3 — dorsal and lateral view, 4 — maxillary palpus, 5 — aedeagus, dorsal and lateral view, 6-8 — female: 6 — fore-tarsus, 7 — hind-tarsus, 8 — maxillary palpus; 9 — *Ch. magniceps*, aedeagus, dorsal and lateral view (*Chrysolina birulai wollosowiczi*, lectotype, New Siberian Isls.); 10 — *Ch. bungei*, aedeagus, dorsal and lateral view (Taimyr Penins.); 11 — *Ch. subsulcata*, aedeagus, dorsal and lateral view (*Chrysolina birulai*, lectotype, New Siberian Isls.); 12 — *Ch. subsulcata*, aedeagus, dorsal and lateral view (lectotype, St. Paul Isl.). (Orig.)

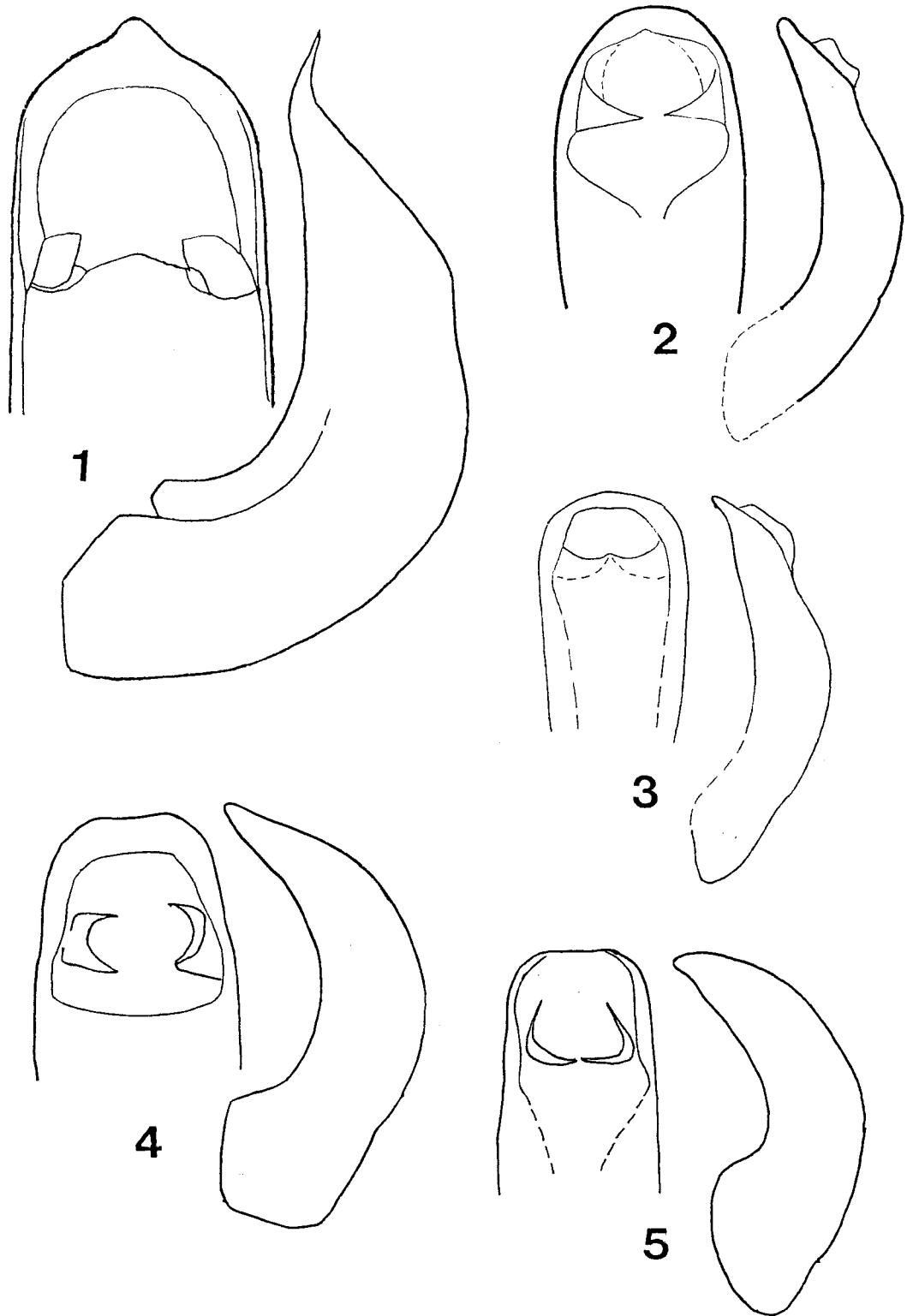


Figure 20: *Chrysolina* (*Arctolina*), aedeagus, dorsal and lateral view: 1 — *Ch. boeberi* (Okhotsk Sea shore), 2 — *Ch. septentrionalis* (*Ch. caurina*, paratype, Alaska), 3 — *Ch. septentrionalis* (holotype, Novaya Zemlya Isls.), 4-5 — *Ch. tundralis* (4 — Lipetsk reg.: Pliuschan' forestry, 5 — Polar Urals: Neroika Mt.). (Orig.)

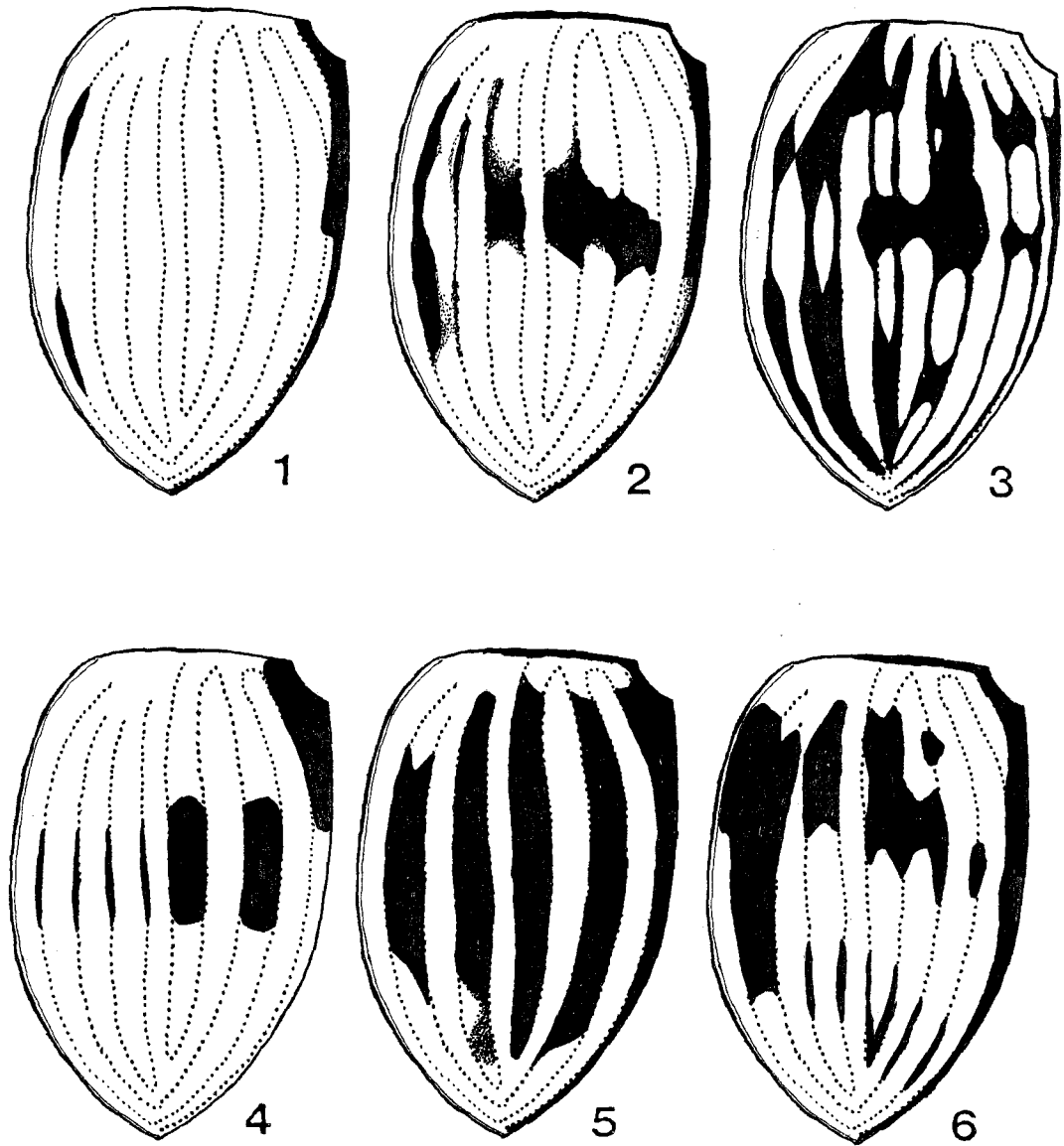


Figure 21: *Chrysolina* (*Atechna*): 1-5 — *Ch. striata*, left elytron, variability of elytral pattern: 1 — typical form (E. Africa), 2 — variation "B sensu Vogel, 1871" (S. Africa), 3 — *ab. lineolata* (*Polysticta lineolata*, holotype, S. Africa), 4 — *ab. lineoligera* (S. Africa), 5 — *ab. fasciata* (S. Africa); 6 — *Ch. tetraspilota*, left elytron (S. Africa). (Orig.)

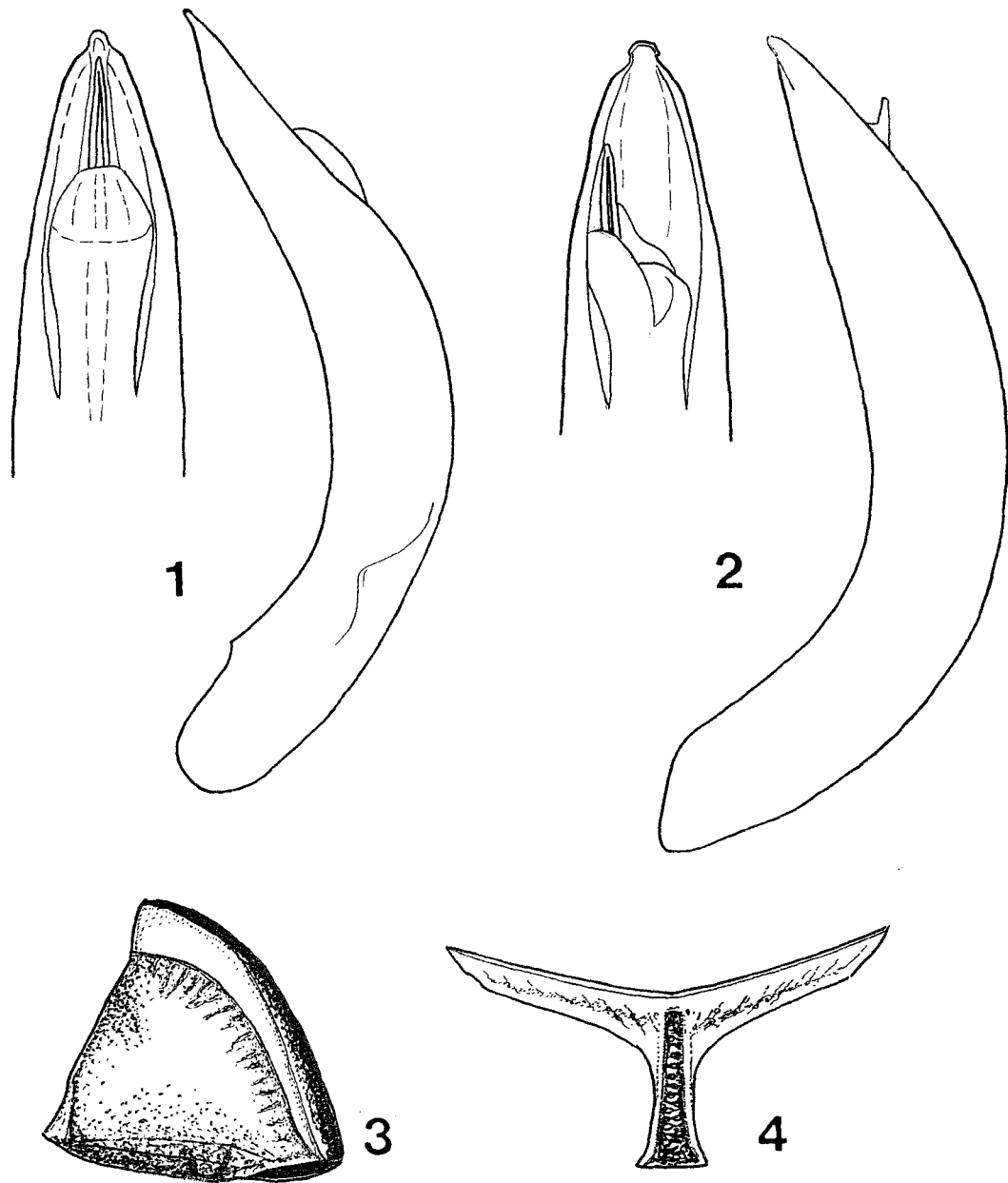


Figure 22: *Chrysolina* (*Atechna*): 1 — *Ch. tetraspilota* (S. Africa), male, aedeagus; 2 — *Ch. striata* (W. Africa), male, aedeagus; 3-4 — *Ch. tetraspilota*, female: 3 — prothoracic hypomera, 4 — prosternum. (Orig.)

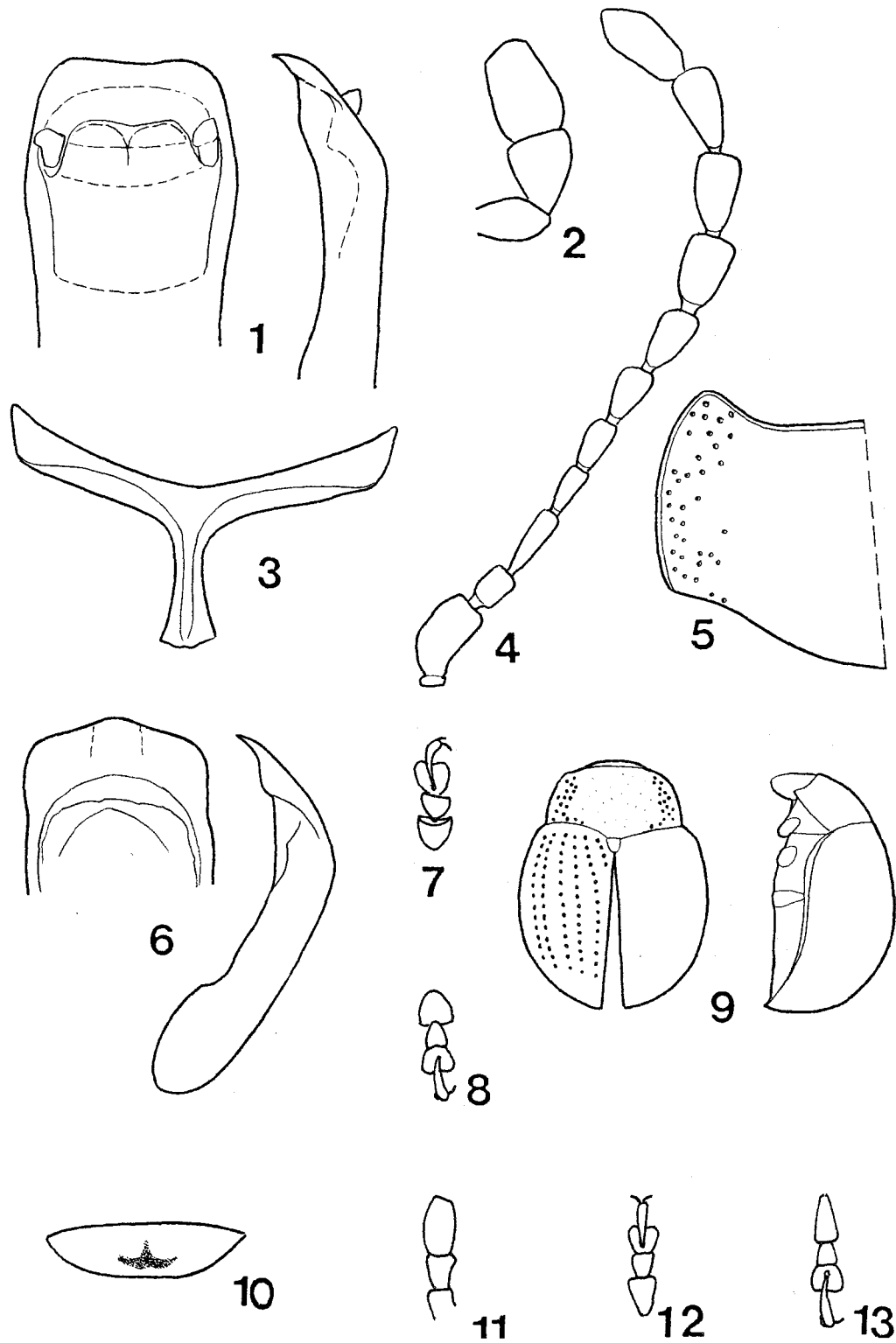


Figure 23: *Chrysolina (Atlasiana) seriatopora*: 1-5 — male (Tunisia): 1 — aedeagus, dorsal and lateral view, 2 — maxillary palpus, 3 — prosternum, 4 — antenna, 5 — pronotum, dorsal view; 6-10 — male (Algeria): 6 — aedeagus, dorsal and lateral view, 7 — fore-tarsus, 8 — hind-tarsus, 9 — dorsal and lateral view, 10 — last abdominal sternite; 11-13 — female (Algeria): 11 — maxillary palpus, 12 — fore-tarsus, 13 — hind tarsus. (Orig.)



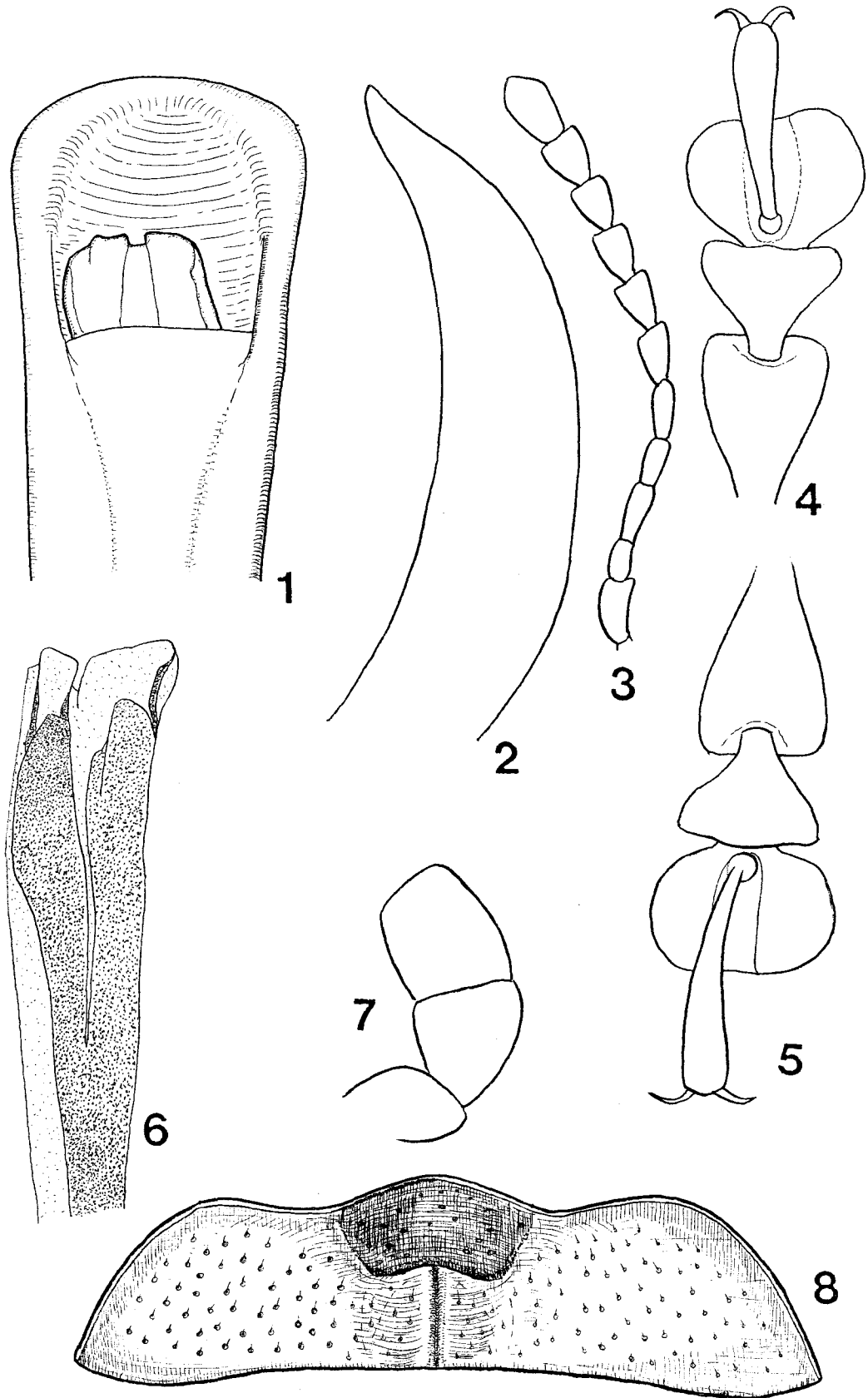


Figure 24: *Chrysolina (Bechynia) milleri*, male: 1 — aedeagus, dorsal view, 2 — aedeagus, lateral view, 3 — antenna, 4 — fore-tarsus, 5 — hind-tarsus, 6 — flagellum of aedeagus, 7 — maxillary palpus, 8 — last abdominal sternite. (Orig.)

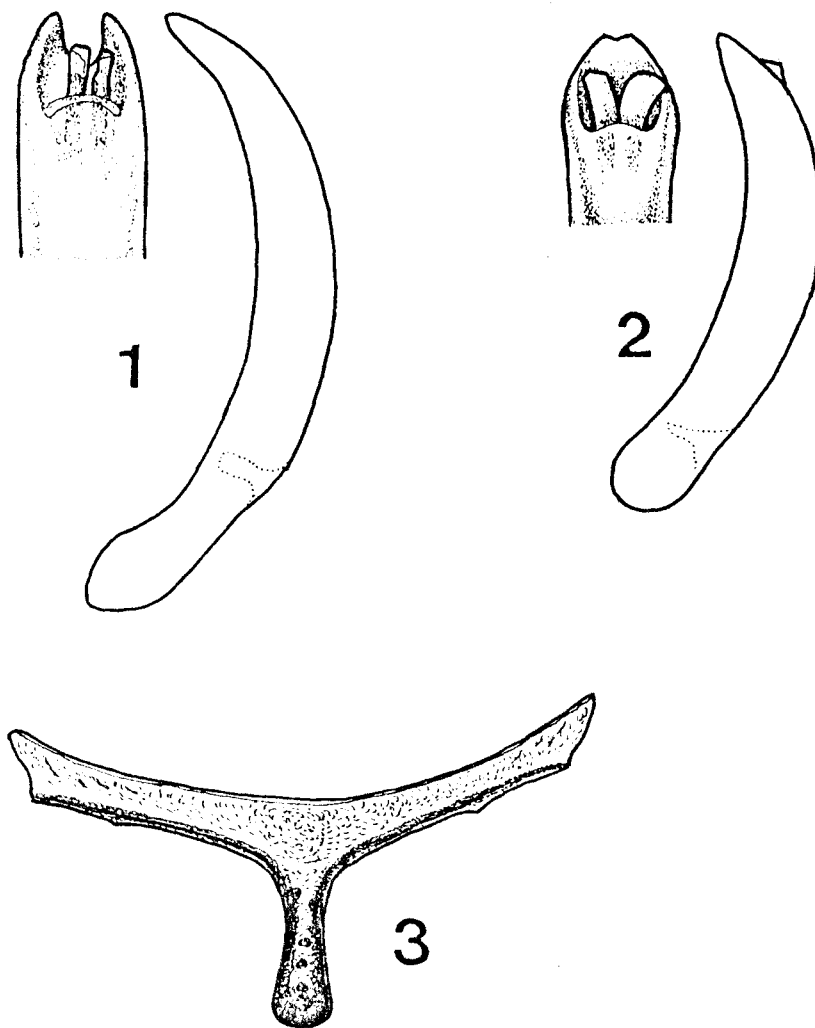


Figure 25: *Chrysolina* (*Bechynia*): 1 — *Ch. platypoda*, aedeagus; 2 — *Ch. philotesia*, aedeagus; 3 — *Ch. milleri*, male, prosternum. (1-2 — after Daccordi, Ruffo, 1980; 3 — orig.)

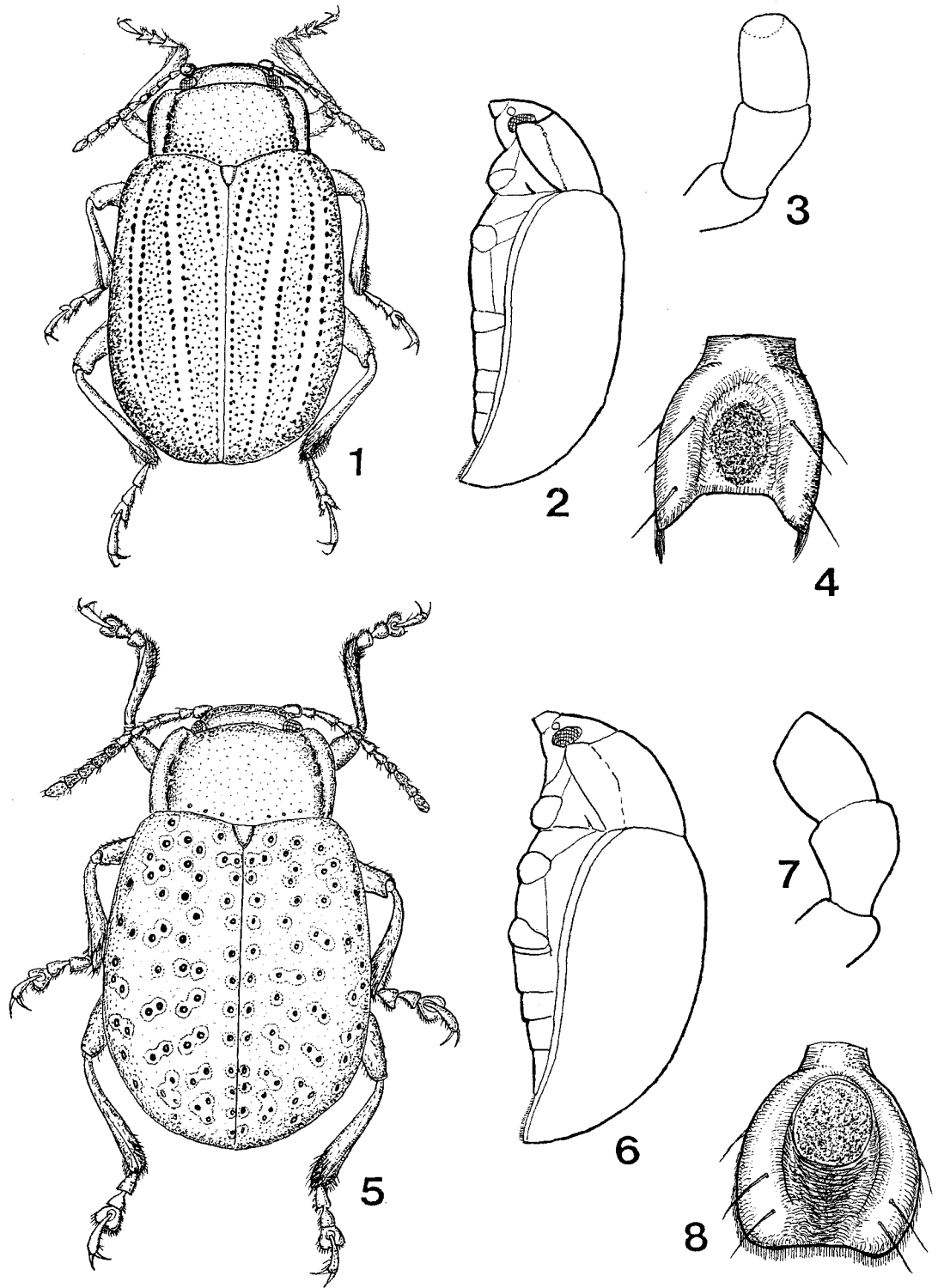


Figure 26: *Chrysolina (Bittotaenia)*: 1-4 — *Ch. aeneipennis*, female (Libya: Tripolitania: Mizda): 1 — dorsal view, 2 — lateral view, 3 — maxillary palpus, 4 — third hind tarsomere; 5-8 — *Ch. punctata*, male (Lebanon): 5 — dorsal view, 6 — lateral view, 7 — maxillary palpus, 8 — third hind tarsomere. (Orig.)

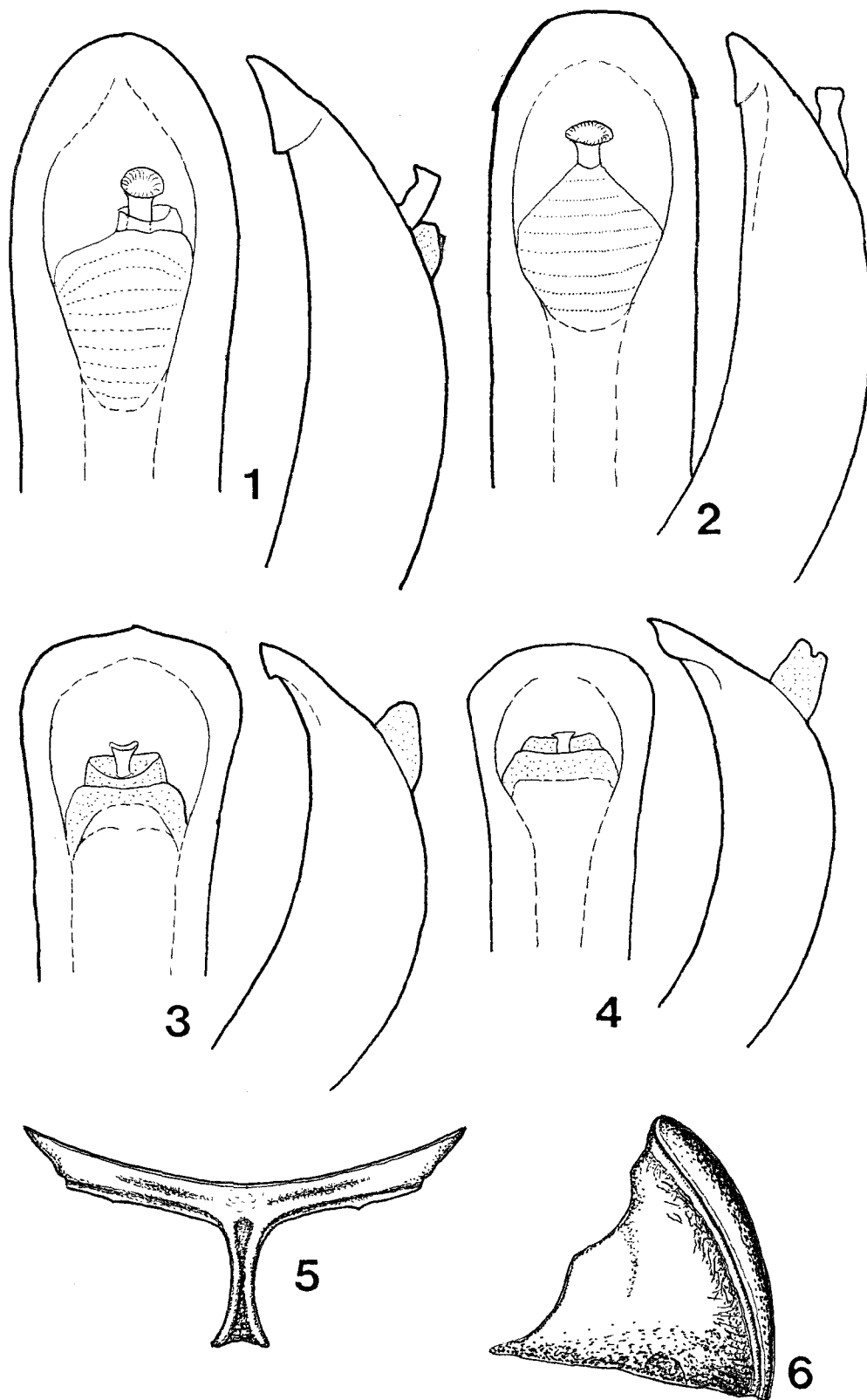


Figure 27: *Chrysolina (Bittotaenia)*: 1-4 — aedeagus, dorsal and lateral view: 1 — *Ch. compuncta* (Turkey: Stamboul), 2 — *Ch. salviae salviae* (Montenegro), 3 — *Ch. grata grata* (Turkmenistan), 4 — *Ch. grata derelicta* (Syria); 5-6 — *Ch. compuncta*, male: 5 — prosternum, 6 — prothoracic hypomera. (Orig.)

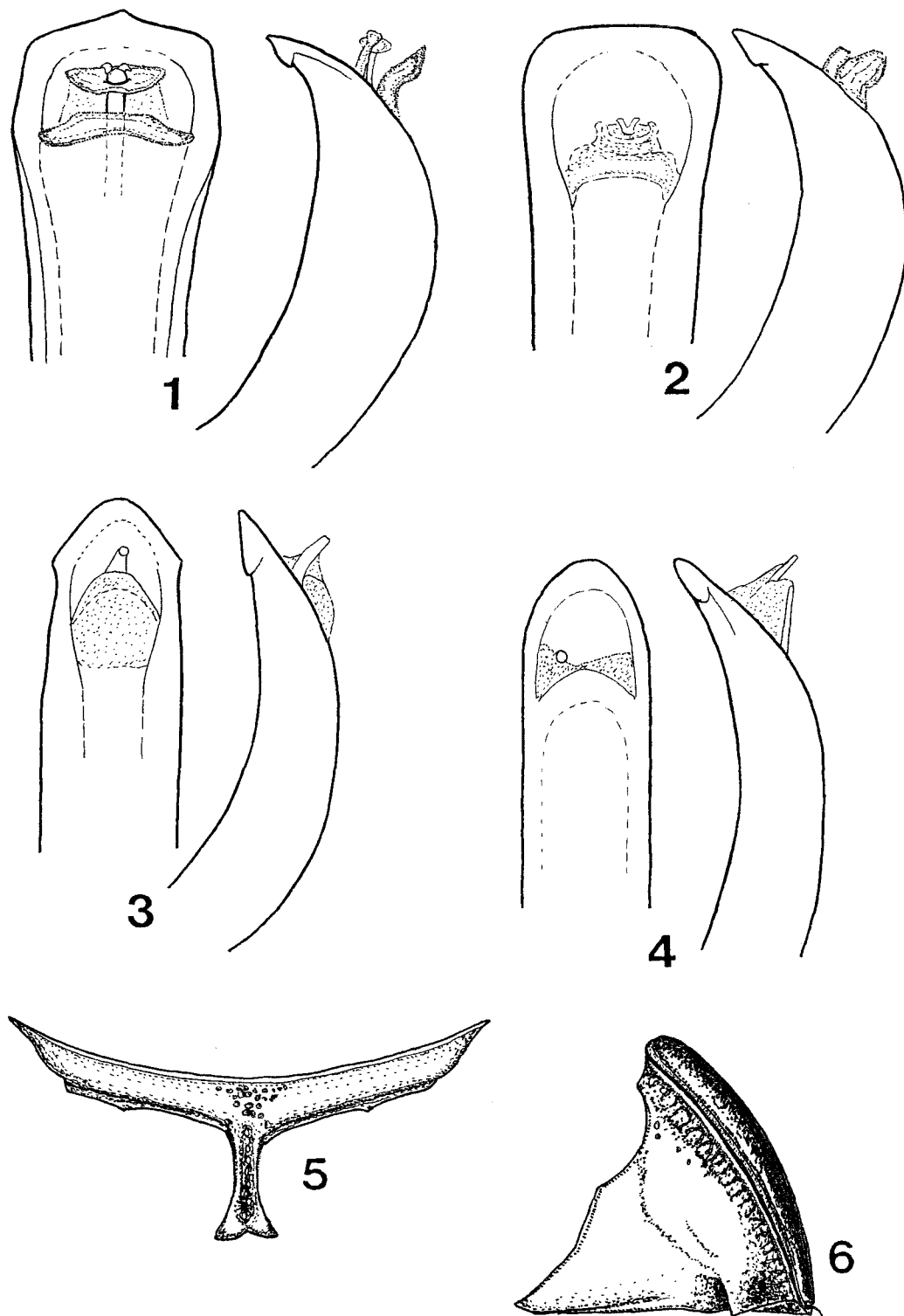


Figure 28: *Chrysolina (Bittotaenia)*: 1-4 — aedeagus, dorsal and lateral view: 1 — *Ch. mellyi* (Afghanistan), 2 — *Ch. turanica* (Turkmenistan), 3-4 — *Ch. aeneipennis* (3 — Jordan, 4 — Israel); 5-6 — *Ch. grata*, male: 5 — prosternum, 6 — prothoracic hypomera. (Orig.)

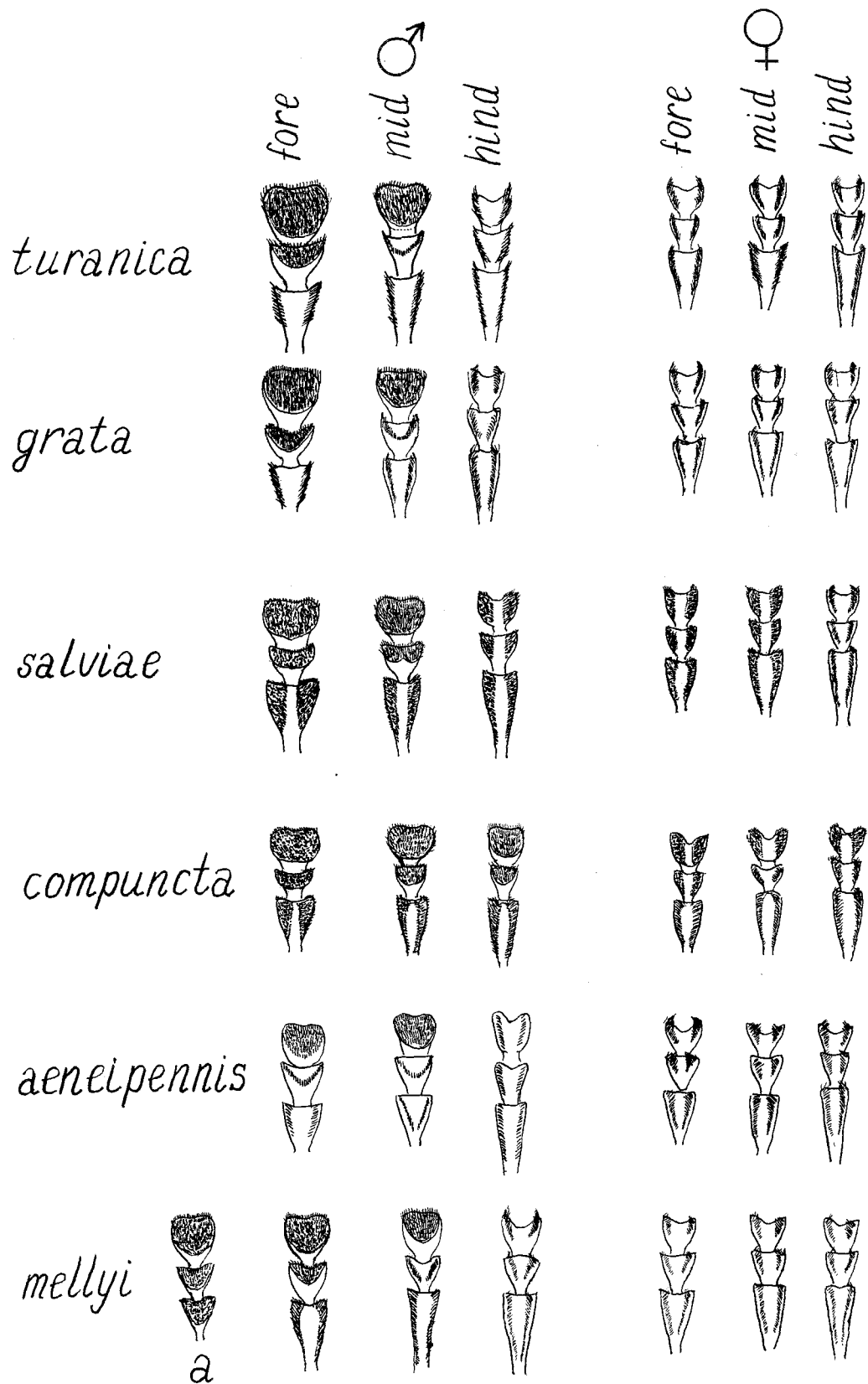


Figure 29: *Chrysolina* (*Bittotaenia*), tarsal sole (a — *Ch. mellyi*, male fore-tarsus, variability, Kabul). (Orig.)

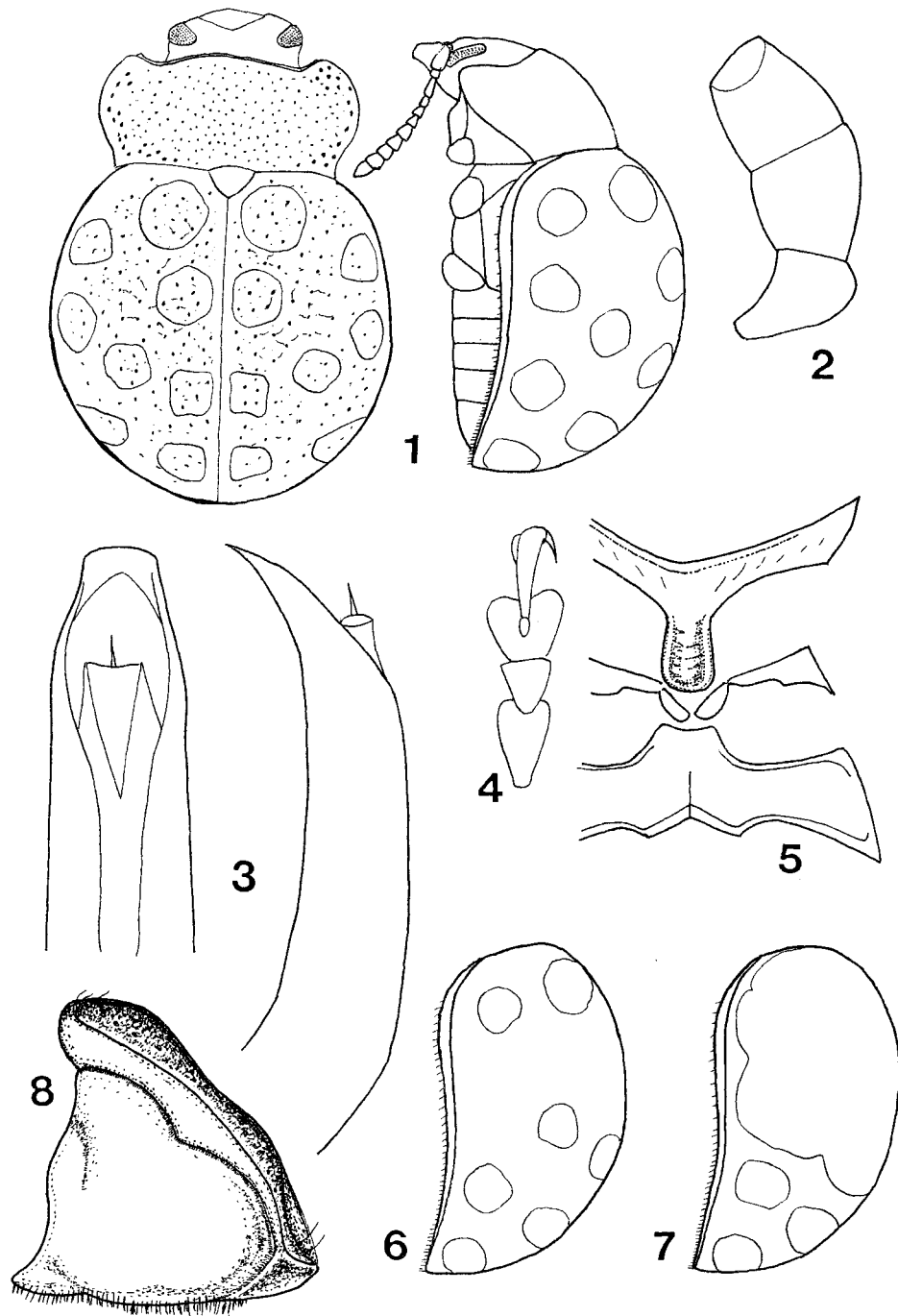


Figure 30: *Camerounia ornata*: 1-5 — male (Cameroon: Soppo): 1 — dorsal and lateral view, 2 — maxillary palpus, 3 — aedeagus, dorsal and lateral view, 4 — fore-tarsus, 5 — prosternum, mesosternum, and metasternum; 6-7 — variability of elytral pattern, lateral view: 6 — male (Musake-Hütte), 7 — female (Buëa); 8 — prothoracic hypomera (Cameroon: Soppo). (Orig.)

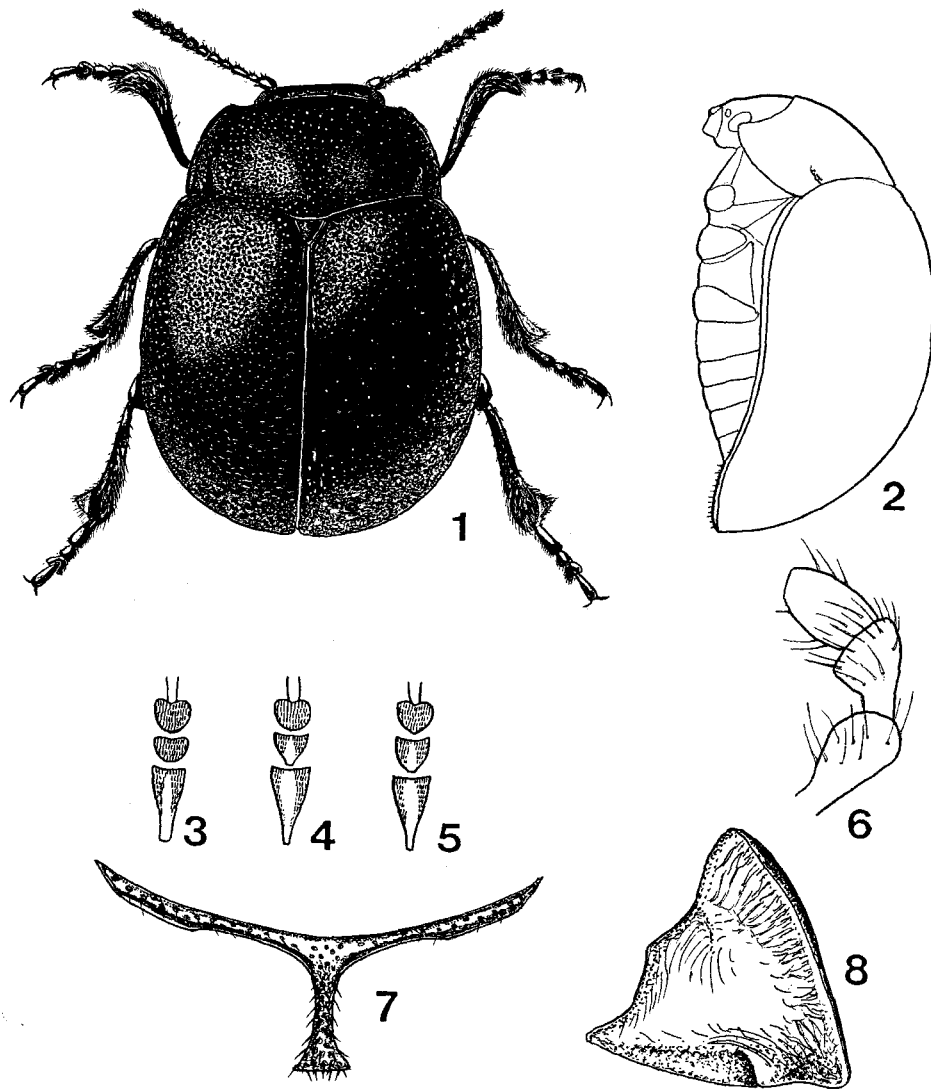


Figure 31: *Chrysolina (Cecchiniola) platyscelidina*, female (Crimea: Simferopol): 1 — dorsal view, 2 — lateral view, 3-5 — tarsal sole: 3 — fore-tarsus, 4 — mid-tarsus, 5 — hind-tarsus, 6 — maxillary palpus, 7 — prosternum, 8 — prothoracic hypomera. (Orig.)



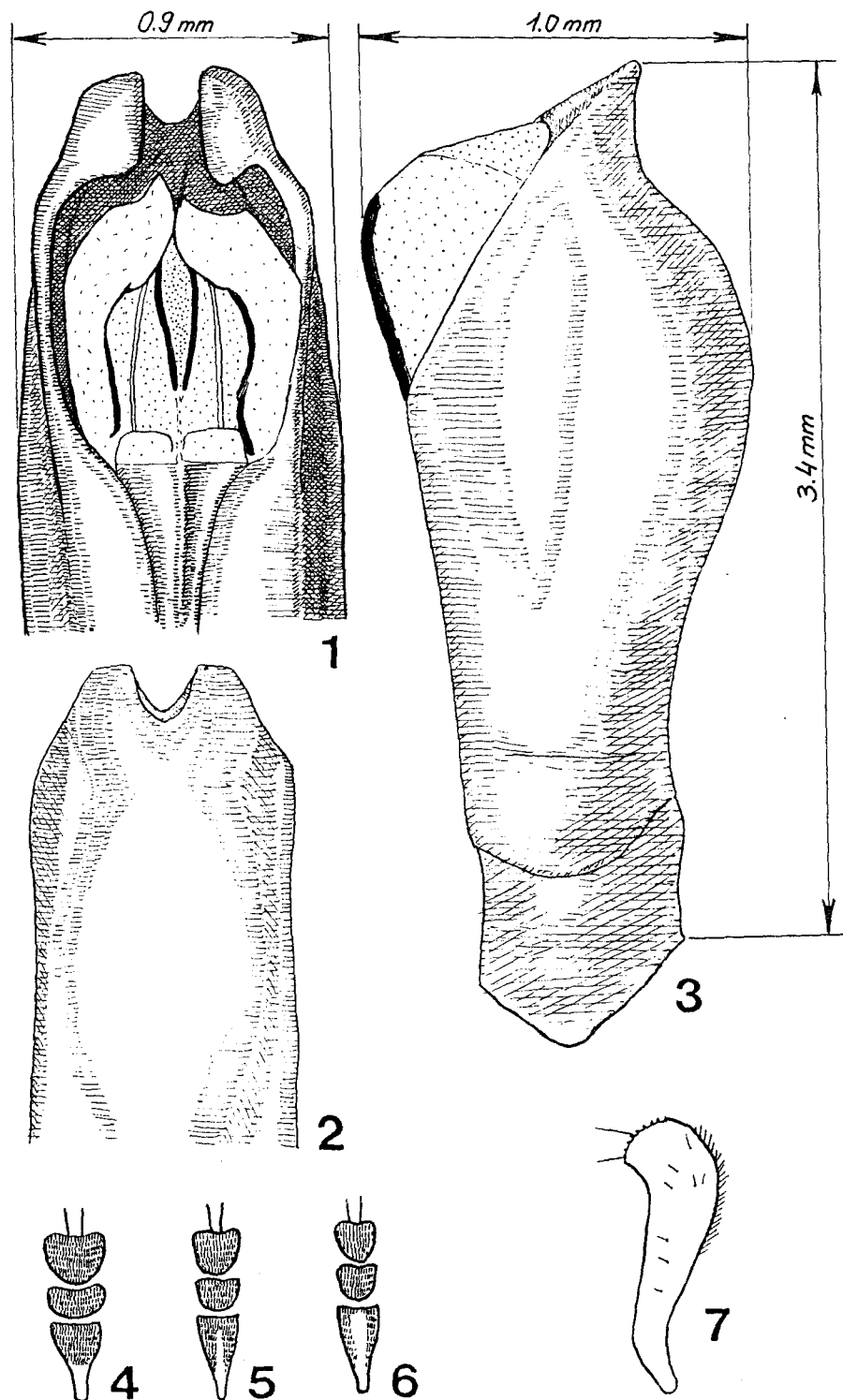


Figure 32: *Chrysolina (Cecchiniola) platyscelidina*, male (Crimea: Simferopol): 1-3 — aedeagus: 1 — dorsal view, 2 — ventral view, 3 — lateral view; 4-6 — tarsal sole: 4 — fore-tarsus, 5 — mid-tarsus, 6 — hind-tarsus; 7 — fore tibia. (Orig.)

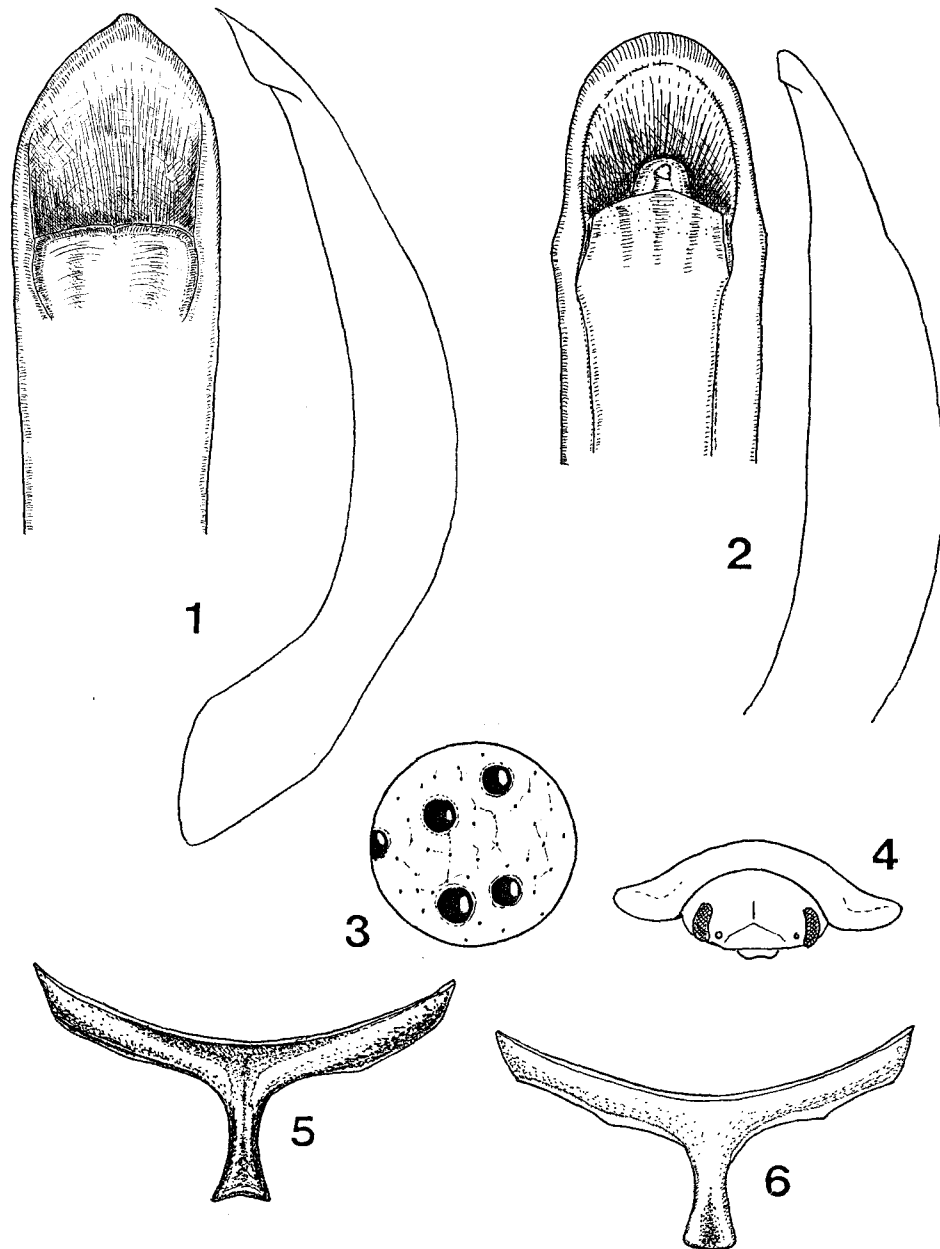


Figure 33: *Chrysolina* (Centoptera): 1 — *Ch. bicolor*, aedeagus, dorsal and lateral view (Syria); 2-4 — *Ch. metallica*: 2 — aedeagus, dorsal and lateral view, 3 — elytral puncturation, 4 — head and pronotum, frontal view; 5-6 — prosternum: 5 — *Ch. bicolor*, male, 6 — *Ch. metallica*, male. (Orig.)

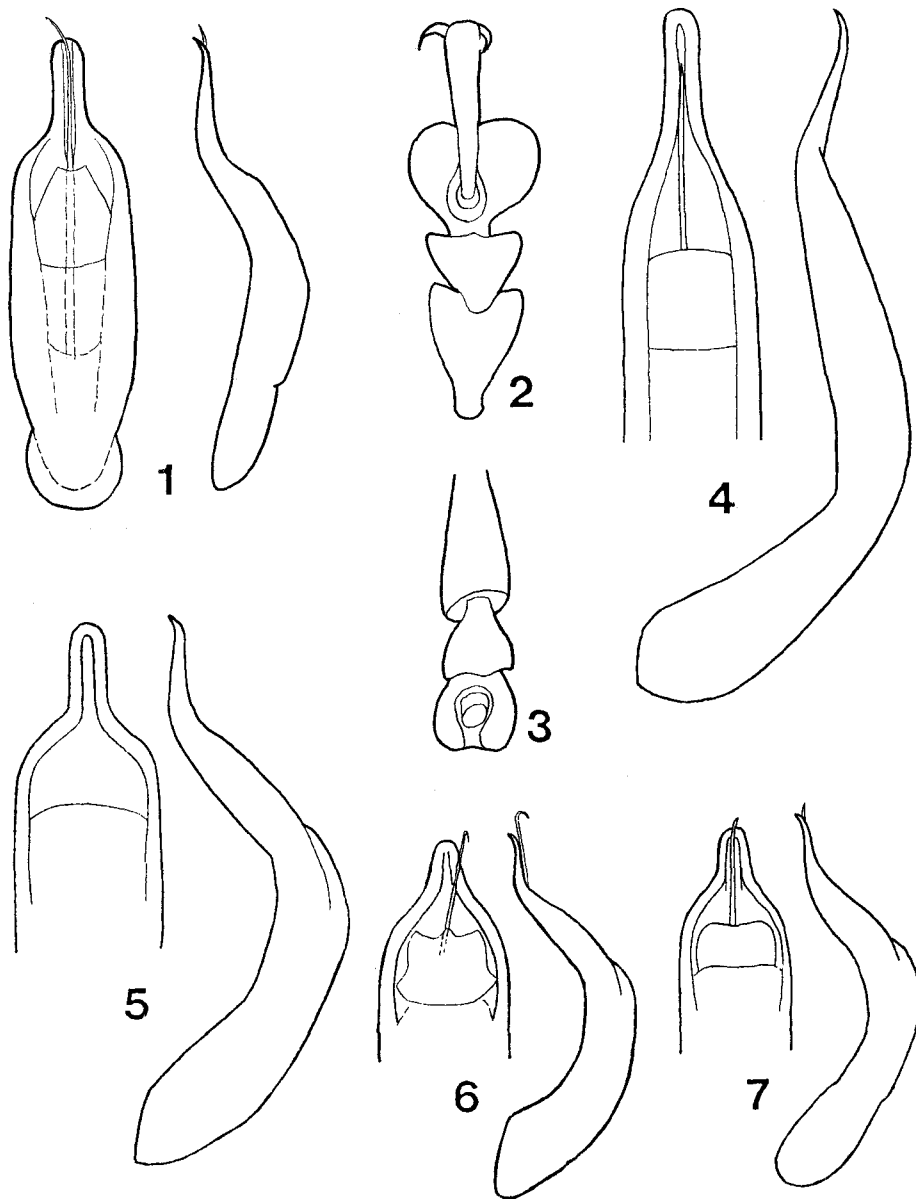


Figure 34: *Chrysolina* (*Chalcoidea*): 1-3 — *Ch. marginata bodemeyeri*, male (syntype, Iran): 1 — aedeagus, dorsal and lateral view, 2 — fore-tarsus, 3 — hind-tarsus; 4 — *Ch. marginata songarica*, aedeagus, dorsal and lateral view (Kyrgyzstan); 5 — *Ch. marginata marginata* (Armenia); 6-7 — *Ch. marginata borealis*, aedeagus, dorsal and lateral view (6 — Kola Penins., 7 — Bering Sea shore). (Orig.)

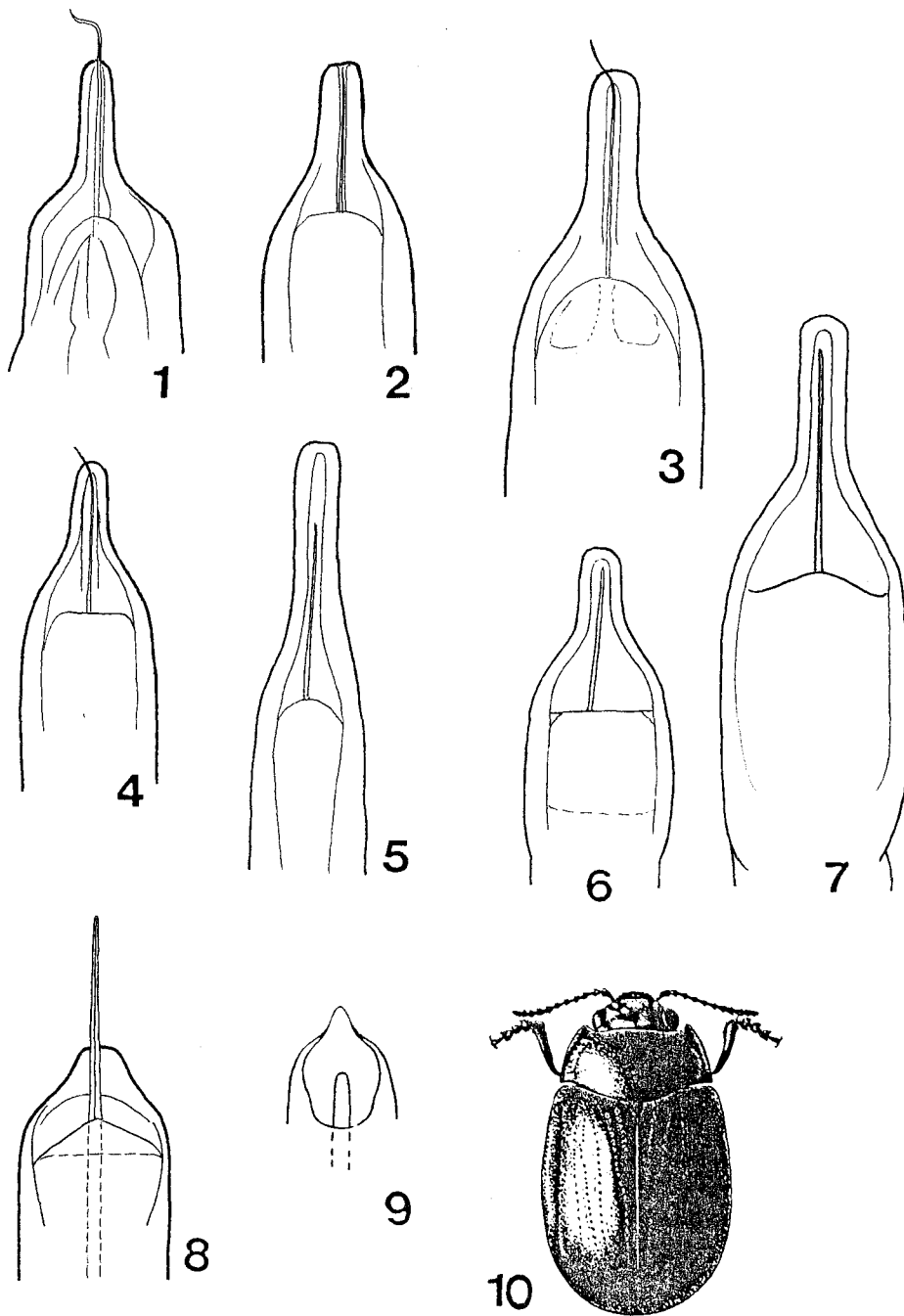


Figure 35: *Chrysolina* (*Chalcoidea*): 1-8 — aedeagus, dorsal view: 1 — *Ch. marginata marginata* (*Ch. marginata unificans*, syntype, S. Caucasus: Nakhichevan), 2 — *Ch. marginata dierythra* (Sicily), 3 — *Ch. marginata sanguineocincta* (Jordan), 4 — *Ch. marginata glacialis* (Switzerland), 5 — *Ch. marginata songarica* (neotype, Kazakhstan: "Songaria"), 6 — *Ch. marginata sculpticollis* (Pyrenees), 7 — *Ch. marginata* intermediate specimen between nominotypical subspecies and subspecies *songarica* (Russia: Kurgan reg.), 8 — *Ch. janbechynei* (syntype, Spain); 9-10 — *Ch. sarroensis*: 9 — aedeagus, dorsal view, 10 — general dorsal view. (9, 10 — after: Kocher, 1958; others — orig.)

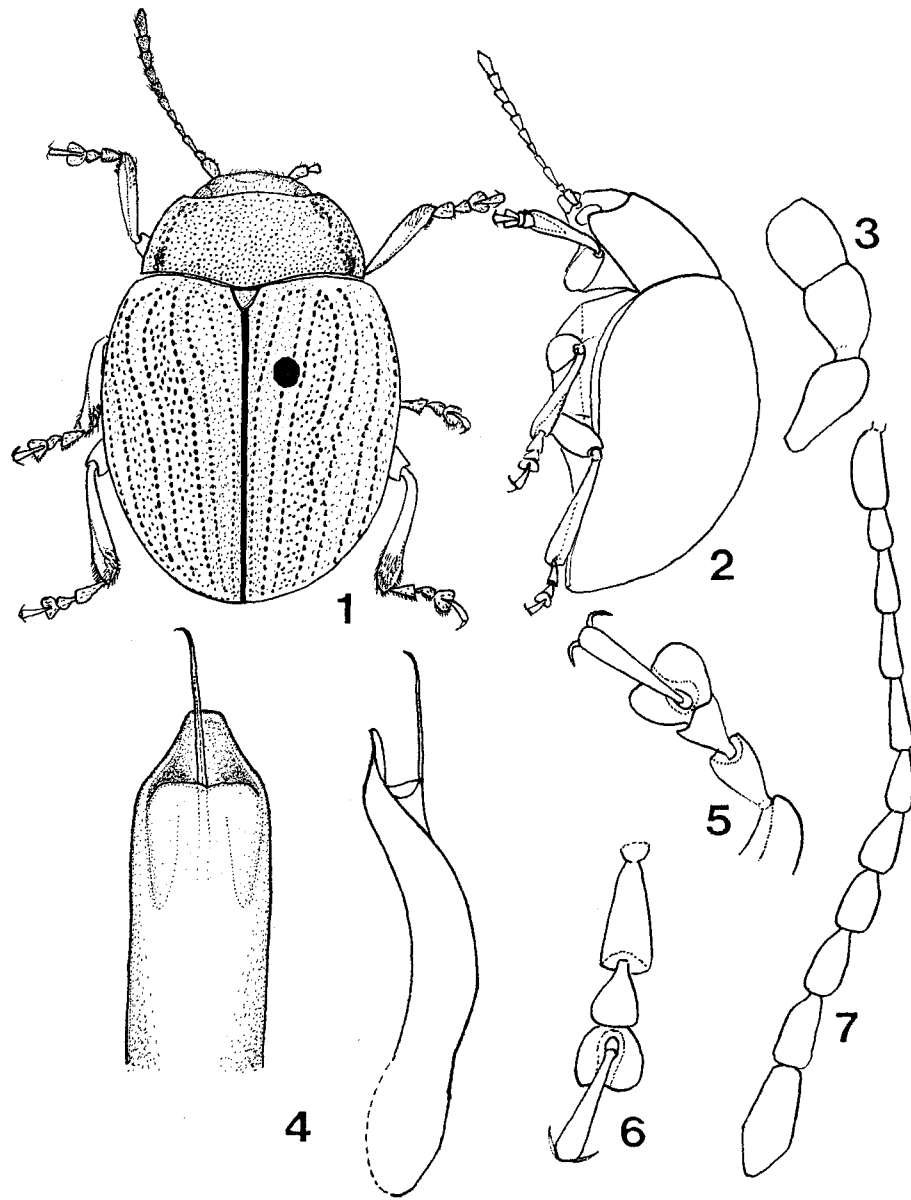


Figure 36: *Chrysolina (Chalcoidea) janbechyni*, male (*Chrysomela curvilinea*, lectotype, Spain: Aranjuez): 1 — dorsal view, 2 — lateral view, 3 — maxillary palpus, 4 — aedeagus, dorsal and lateral view, 5 — fore-tarsus, 6 — hind-tarsus, 7 — antenna. (Orig.)

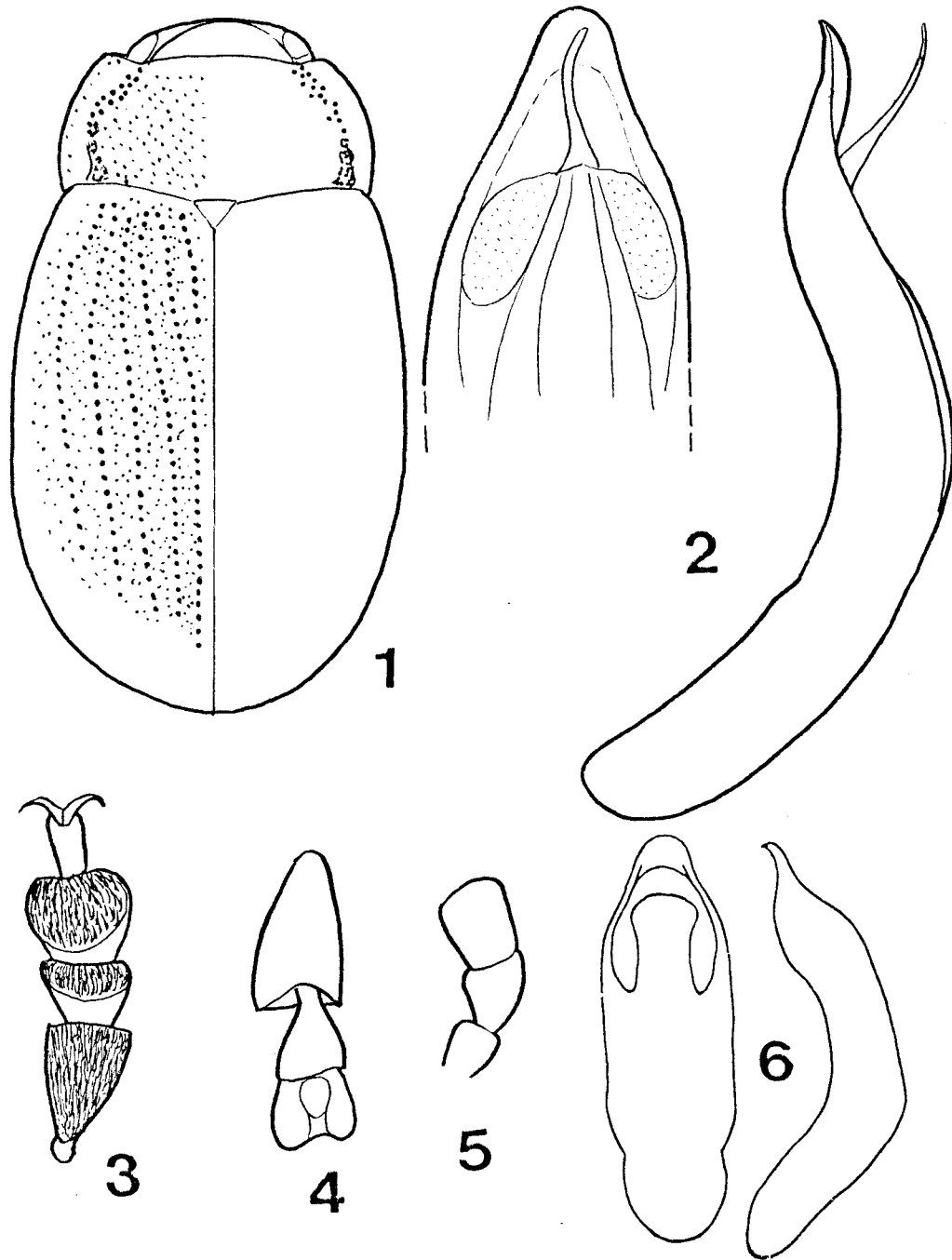


Figure 37: *Chrysolina* (*Chalcoidea*): 1-5 — *Ch. dieckmanni dieckmanni*, male (holotype, Amur river): 1 — dorsal view, 2 — aedeagus, dorsal and lateral view, 3 — sole of fore-tarsus, 4 — hind-tarsus, 5 — maxillary palpus; 6 — *Ch. dieckmanni alaiensis*, aedeagus, dorsal and lateral view. (6 — after: Lopatin, 1998; others — orig.)

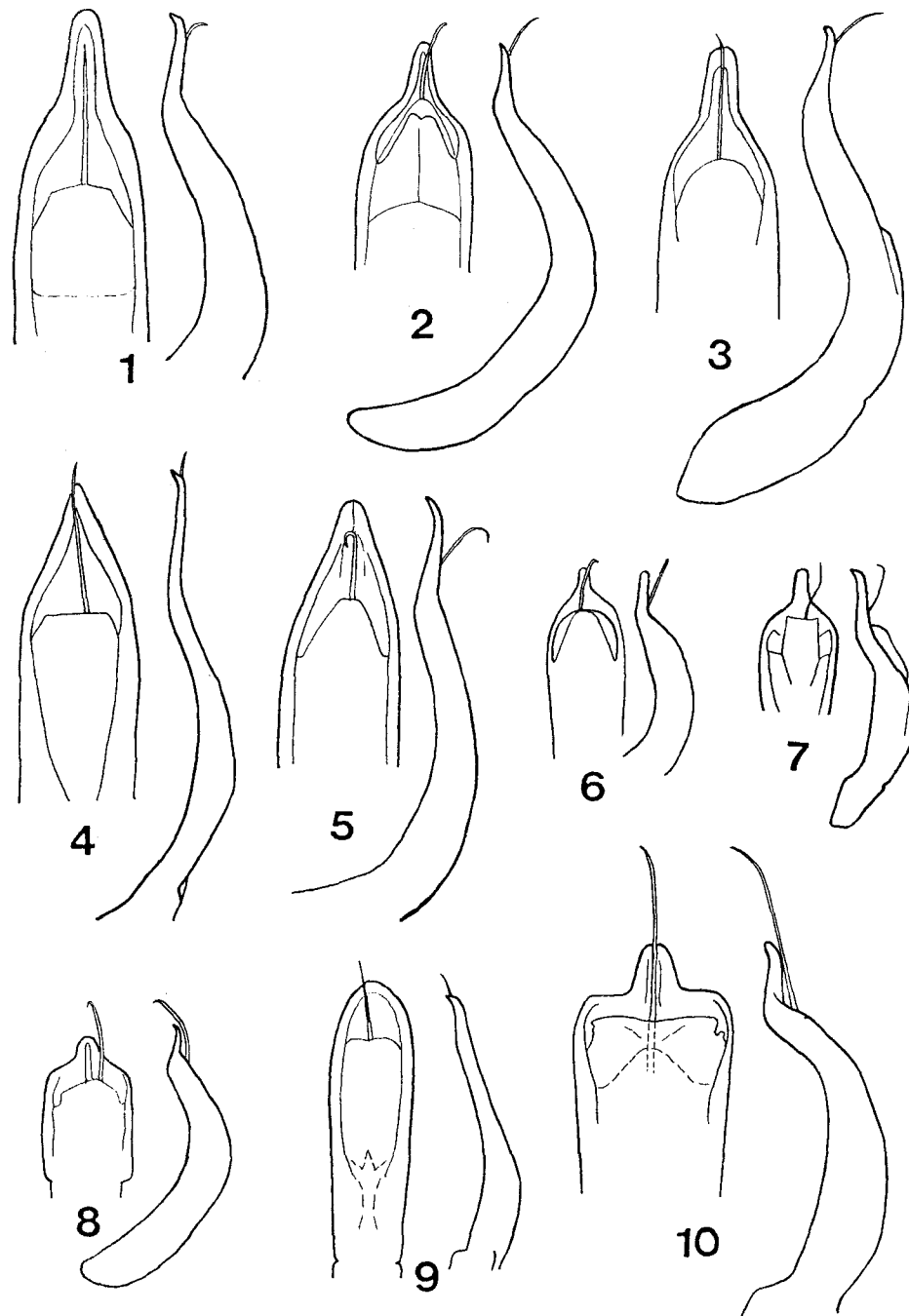


Figure 38: *Chrysolina* (*Chalcoidea*), aedeagus, dorsal and lateral view: 1 — *Ch. carnifex carnifex* (Russia: Kursk reg.), 2 — *Ch. analis* (Austria), 3 — *Ch. zamotajlovi* (paratype, N.-W. Caucasus: Lagonaki Plateau), 4 — *Ch. circumducta* (S. Caucasus: Nakhichevan), 5 — *Ch. besseri* (Kazakhstan), 6 — *Ch. lia*, 7 — *Ch. brahma*, 8 — *Ch. instabilis* (Yakutia), 9 — *Ch. levi*, 10 — *Ch. interstincta subseriata* (France). (7 — after: Takizawa, 1980, 9 — after: Okhrimenko, 1990; others — orig.)

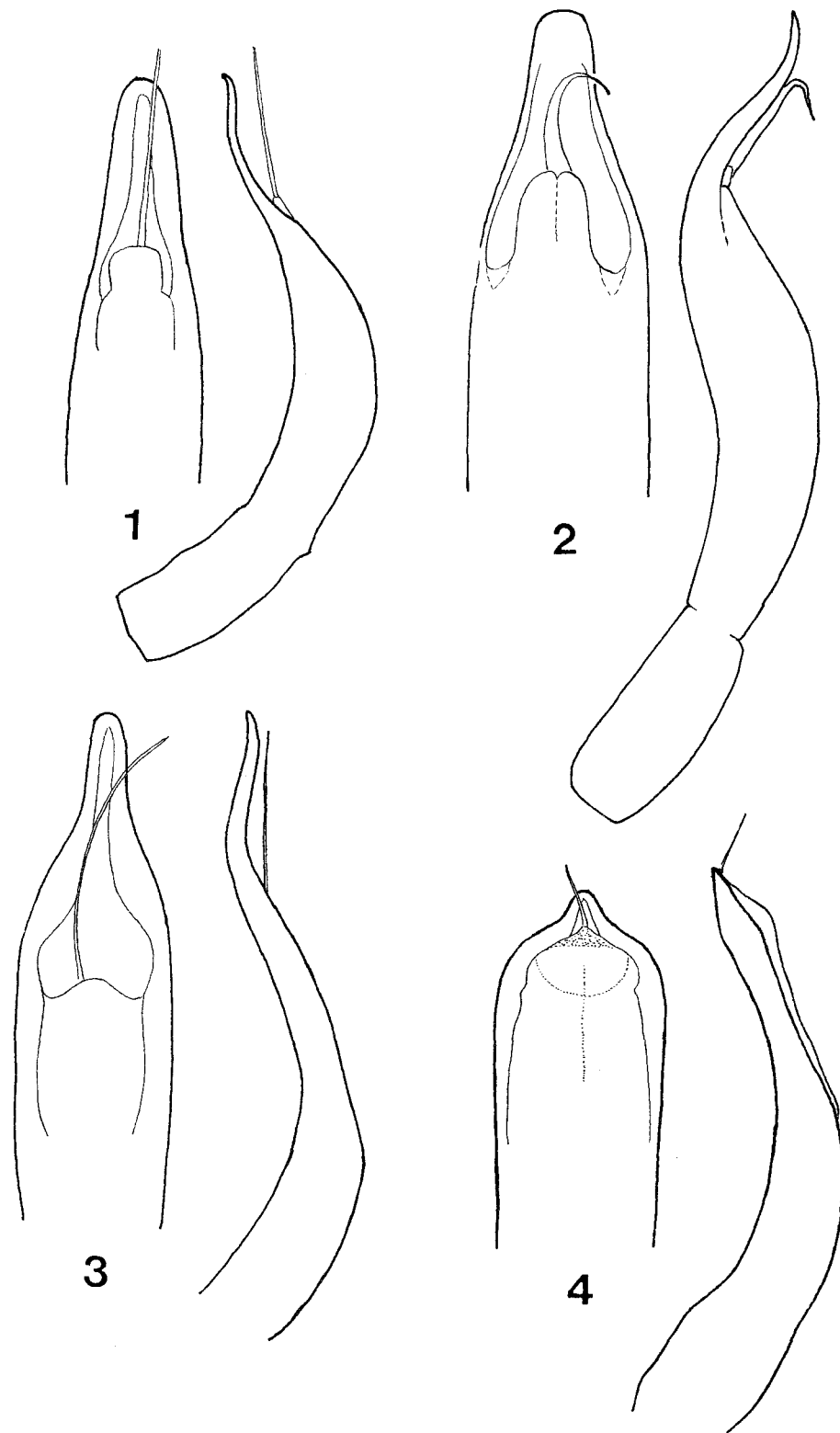


Figure 39: *Chrysolina* (*Chalcoidea*), aedeagus, dorsal and lateral view: 1 — *Ch. superstes superstes* (Morocco: Atlas), 2 — *Ch. immarginata* (syntype, Issyk Kul lake), 3 — *Ch. carnifex carnifex* (*Chrysomela carnifex* var. *konowi*, syntype, Mecklenburg), 4 — *Ch. vagecincta vagecincta* (Tunisia). (Orig.)



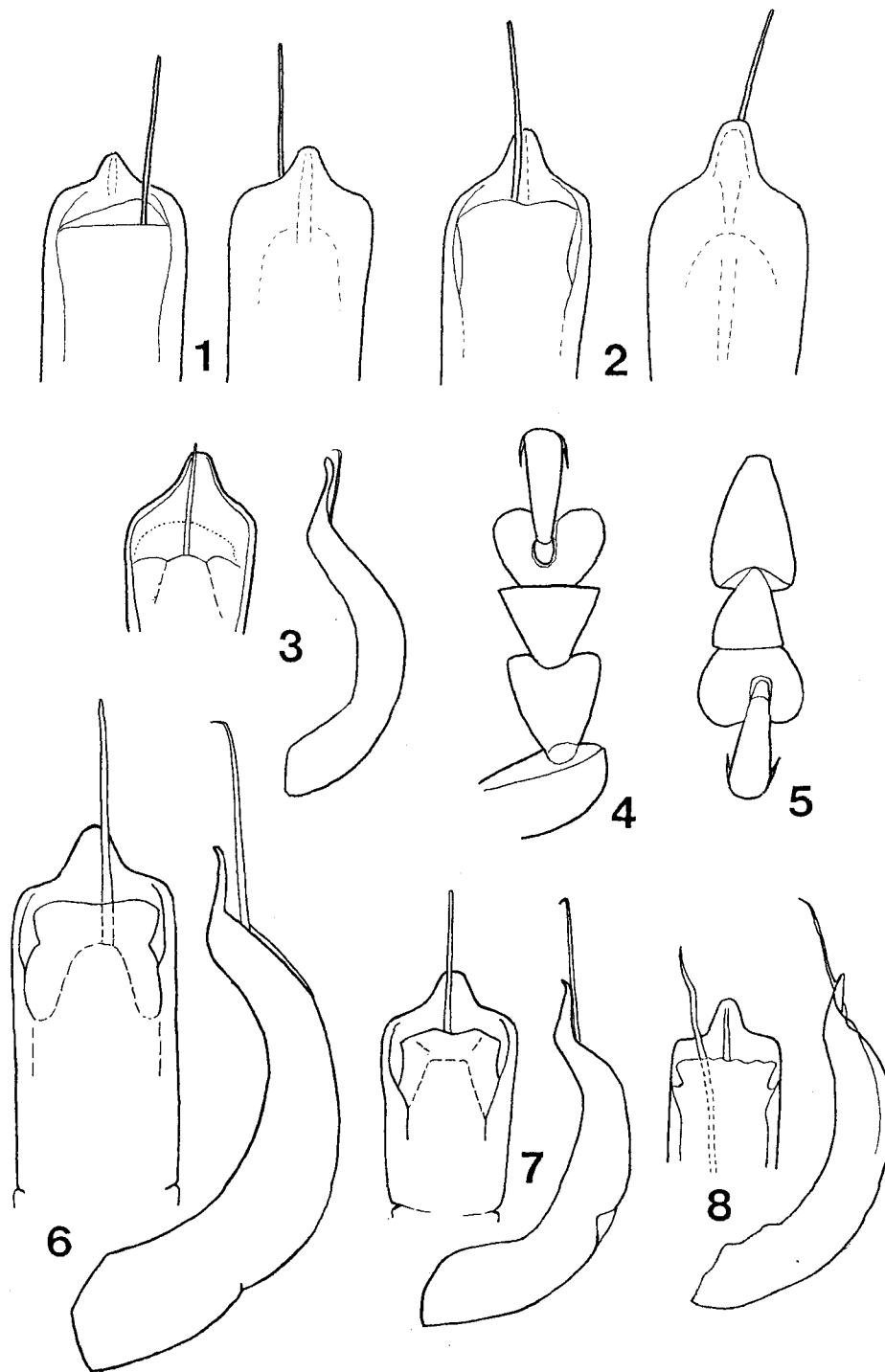


Figure 40: *Chrysolina* (*Chalcoidea*): 1-2 — *Ch. flavomarginata*, aedeagus, dorsal and ventral view (1 — Colorado, 2 — South Dakota); 3-5 — *Ch. hudsonica*, male (Hudson Bay): 3 — aedeagus, dorsal and lateral view, 4 — fore-tarsus, 5 — hind-tarsus; 6-8 — aedeagus, dorsal and lateral view: 6 — *Ch. tesari elbursica* (Turkmenistan), 7 — *Ch. tesari tesari* (Azerbaijan), 8 — *Ch. extorris*. (8 — after: Brown, 1962; others — orig.)

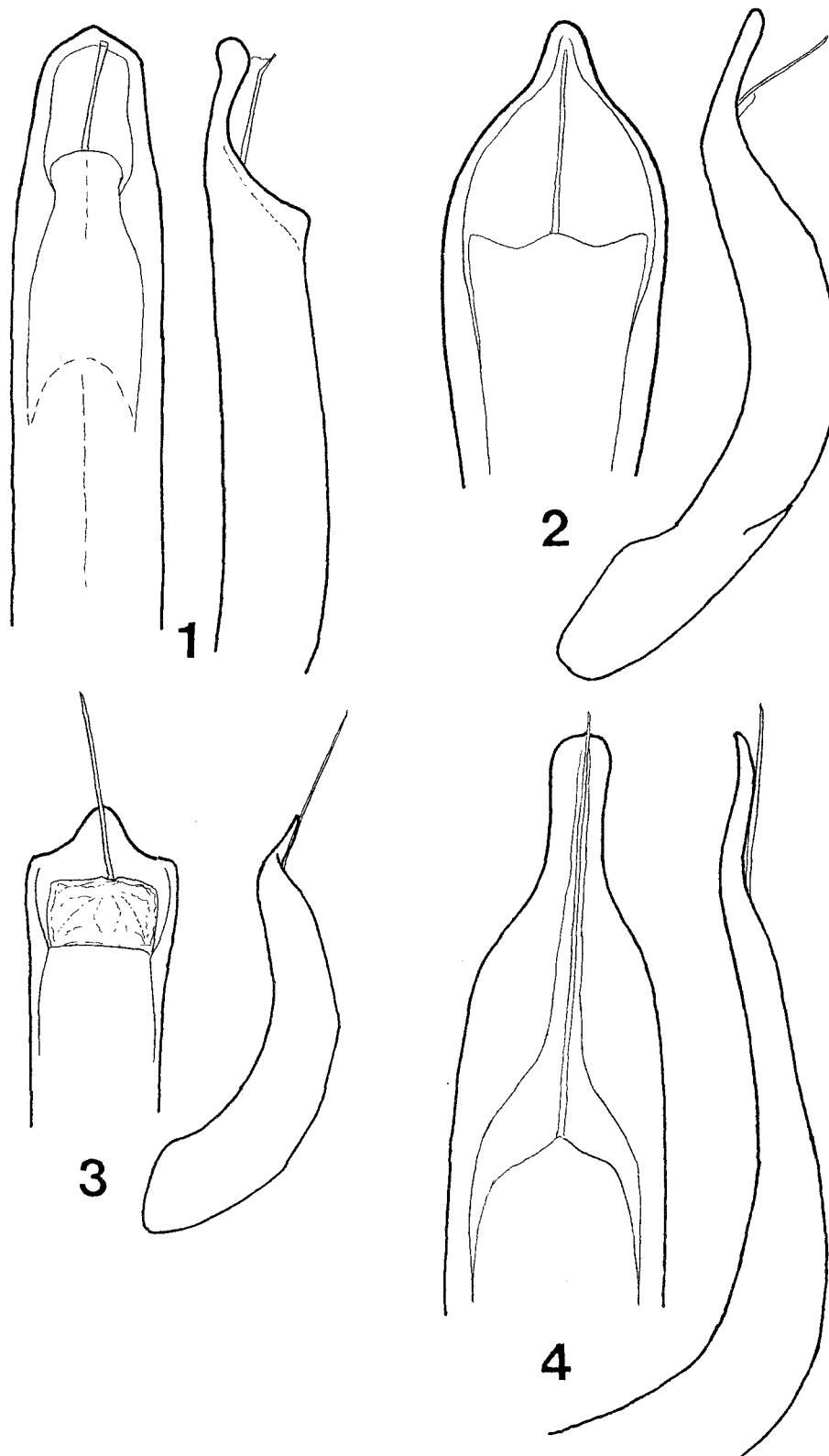


Figure 41: *Chrysolina* (*Chalcoidea*), aedeagus, dorsal and lateral view: 1 — *Ch. lehri* (S.-E. Kazakhstan), 2 — *Ch. lia* (*Ch. freyi*, paratype, W. Pamir), 3 — *Ch. tesari tesari* (*Ch. kulzeri*, syntype, S. Caucasus), 4 — *Ch. carnifer* aff. *fossulata* (N. Algeria). (Orig.)

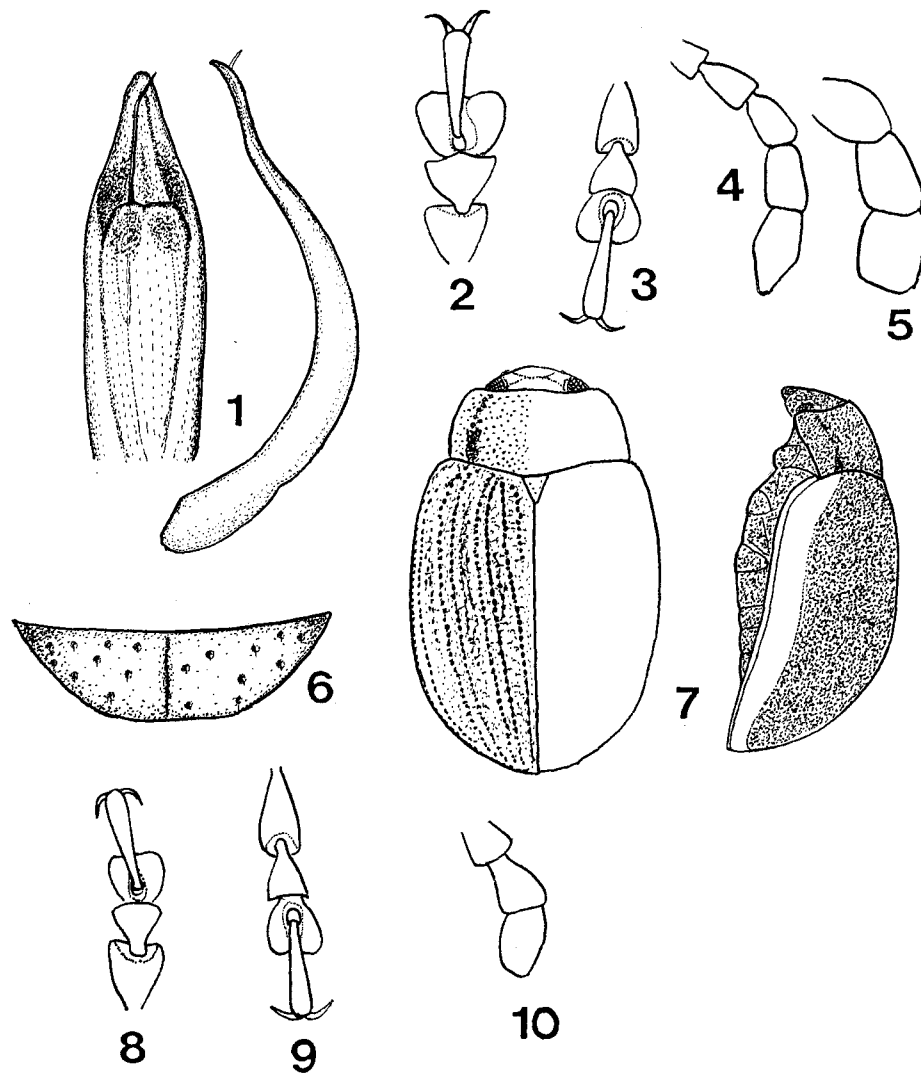


Figure 42: *Chrysolina (Chalcoidea) circumducta* (*Chrysolina amasiensis*: 1-7 — male, lectotype (Amasia), 8-10 — female, paralectotype (Sultan Dagh)): 1 — aedeagus, dorsal and lateral view, 2 — fore-tarsus, 3 — hind-tarsus, 4 — 8th-11th antennomeres, 5 — maxillary palpus, 6 — last abdominal sternite, 7 — dorsal and lateral view, 8 — fore-tarsus, 9 — hind-tarsus, 10 — maxillary palpus. (Orig.)

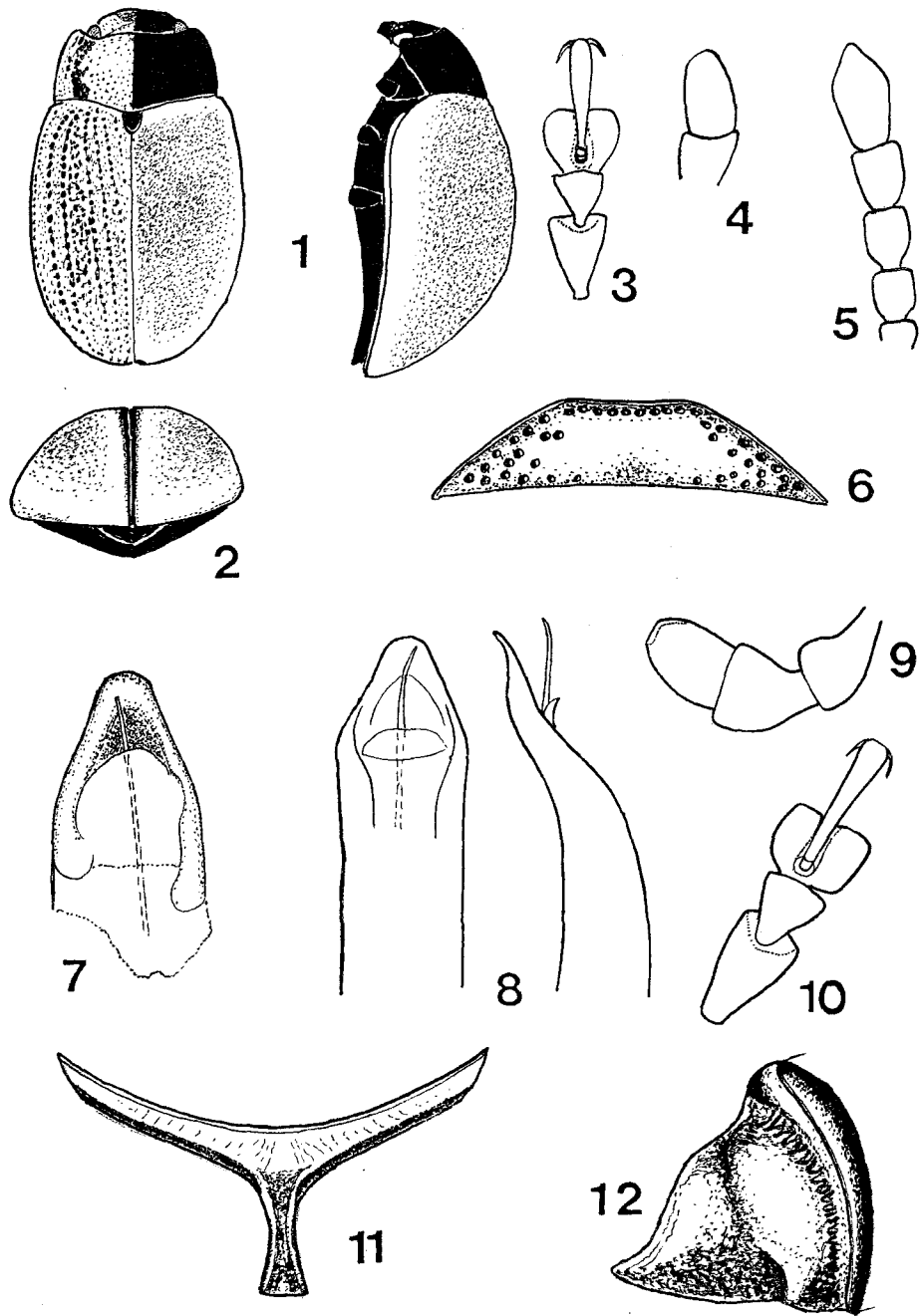


Figure 43: *Chrysolina (Chalcoidea) sellata*: 1-7 — male (lectotype, Amasia): 1 — dorsal and lateral view, 2 — view from behind, 3 — mid-tarsus, 4 — maxillary palpus, 5 — 8th-11th antennomeres, 6 — last abdominal sternite, 7 — aedeagus, dorsal view; 8-10 — male (*Chrysomela cilissa*, holotype, Turkey: Gülek Bodhaz): 8 — aedeagus, dorsal and lateral view, 9 — maxillary palpus, 10 — fore-tarsus; 11-12 — female (*Chrysomela cilissa*, topotype): 11 — prosternum, 12 — prothoracic hypomera. (Orig.)

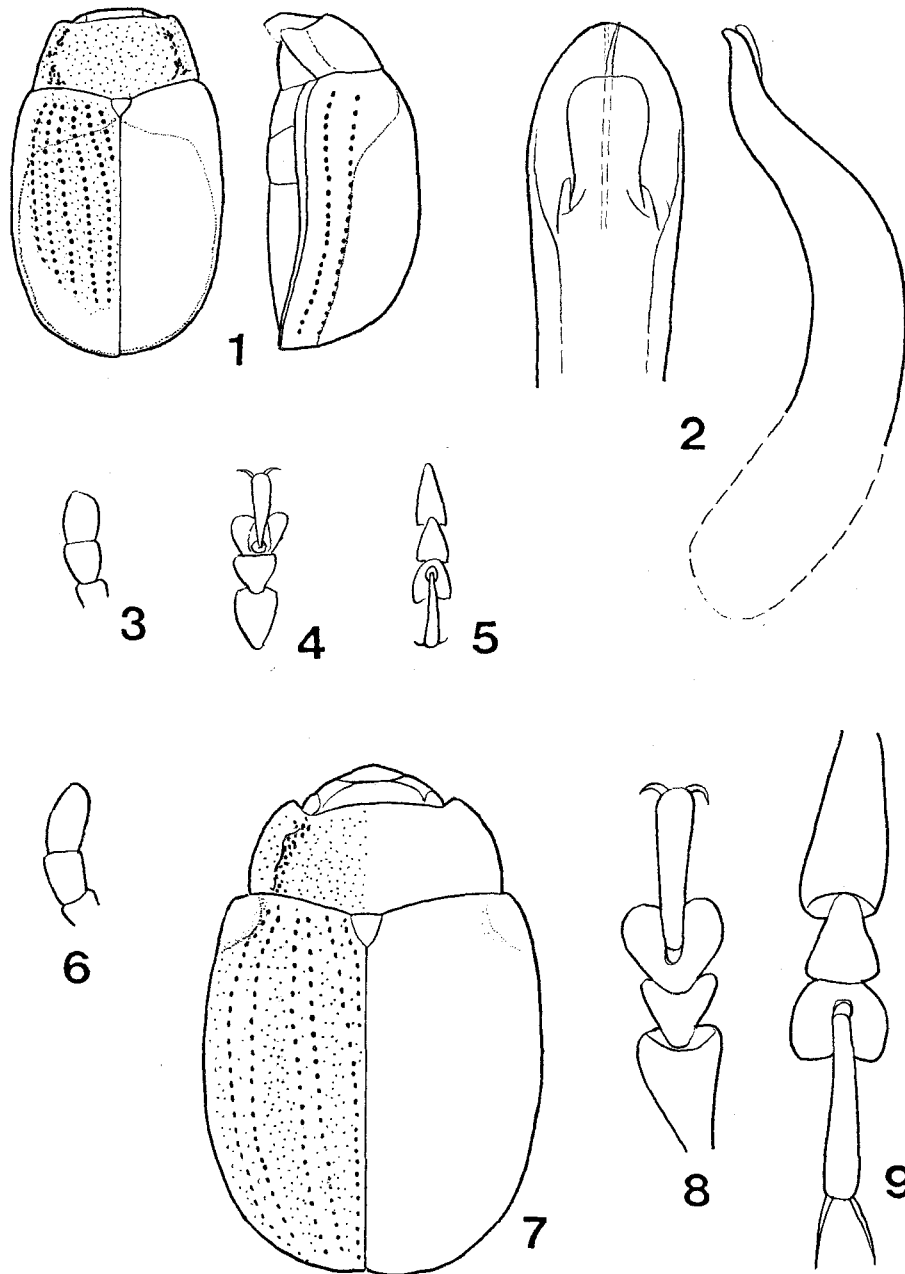


Figure 44: *Chrysolina* (*Chalcoidea*): 1-5 — *Ch. turgaica*, male (Kazakhstan: Turgaiskaya oblast): 1 — dorsal and lateral view, 2 — aedeagus, dorsal and lateral view, 3 — maxillary palpus, 4 — fore-tarsus, 5 — hind-tarsus; 6-9 — *Ch. superstes superstes*, female (Morocco): 6 — maxillary palpus, 7 — dorsal view, 8 — fore-tarsus, 9 — hind-tarsus. (Orig.)

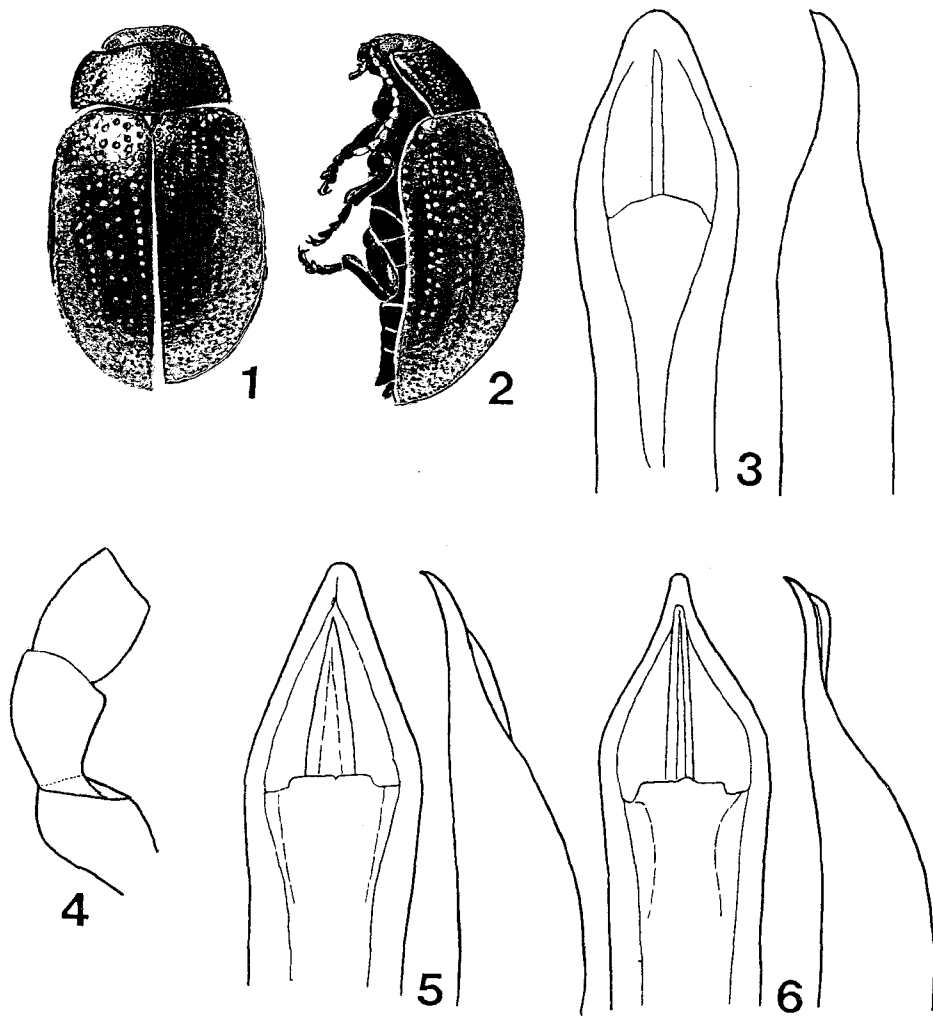


Figure 45: *Chrysolina* (*Chalcoidea*): 1-4 — *Ch. manipurensis* (1, 2, 4 — female, India: Assam; 3 — male, holotype): 1 — dorsal view, 2 — lateral view, 3 — aedeagus, dorsal and lateral view, 4 — maxillary palpus; 5-6 — *Ch. vishnu*, aedeagus, dorsal and lateral view (5 — India: Kurseong, 6 — Nepal). (3 — after: Daccordi, 1980a; others — orig.)

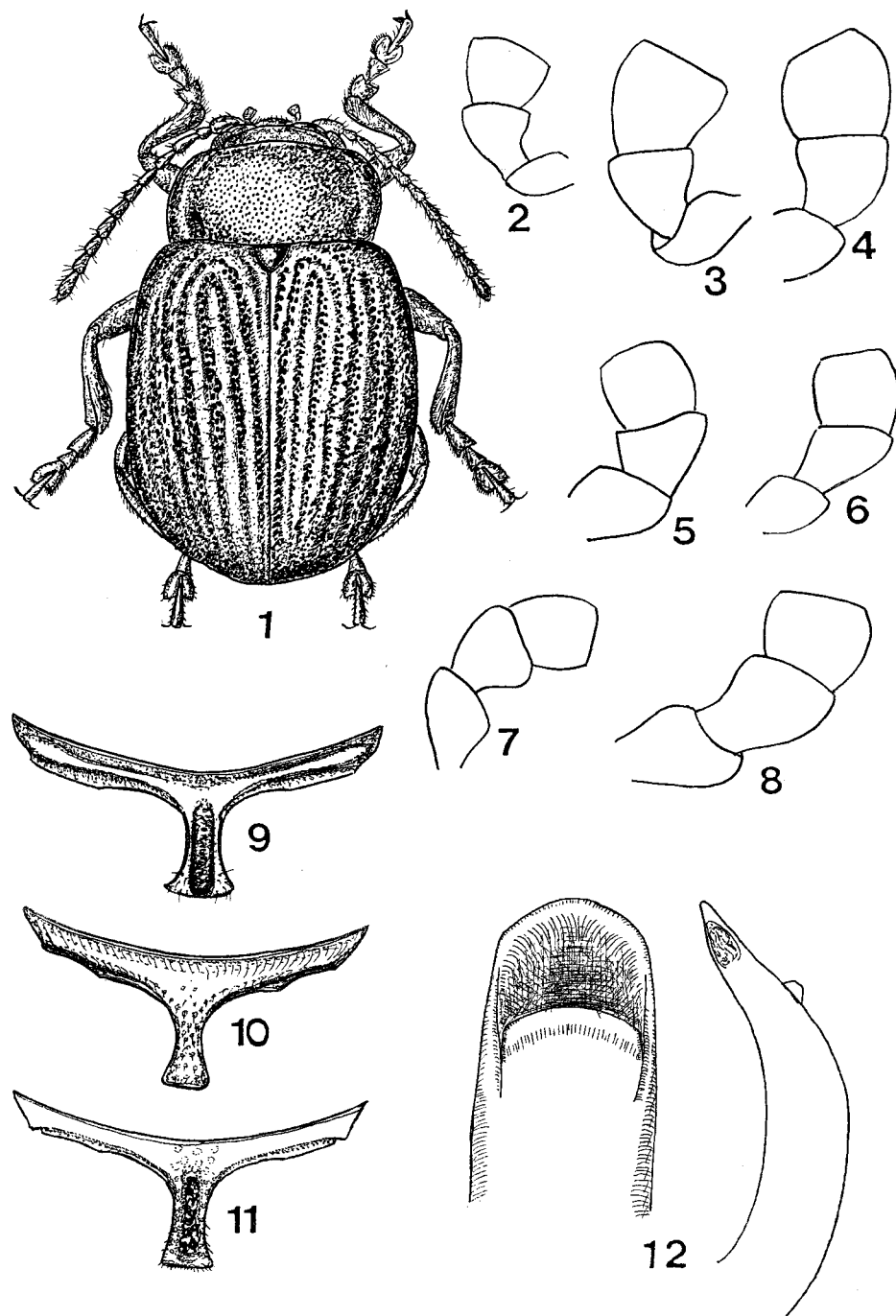


Figure 46: *Chrysolina* (*Chrysocrosita*): 1 — *Ch. alaschanica*, male (China: Alashan Mts.), dorsal view; 2-8 — maxillary palpus: 2 — *Ch. alaschanica*, male, 3-4 — *Ch. sulcicollis* *sulcicollis* (*Chrysomela teichophila*, syntypes, China: Khalgan) (3 — male, 4 — female), 5-6 — *Ch. spectabilis* (Tuva) (5 — male, 6 — female), 7-8 — *Ch. rugulosa* (7 — male (Tuva), 8 — female (Mongolia: Ubsu Nuur aimak)); 9-11 — prosternum: 9 — *Ch. alaschanica*, male (China: Alashan ridge), 10 — *Ch. nikolskyi*, female (Sakhalin Isl.), 11 — *Ch. sulcicollis*, male (China: Khingan); 12 — *Ch. nikolskyi adzhalamica* (holotype *Ch. sulcicollis adzhalamica*, Khabarovsk Krai: Sovetskaya Gavan), aedeagus, dorsal and lateral view. (Orig.)

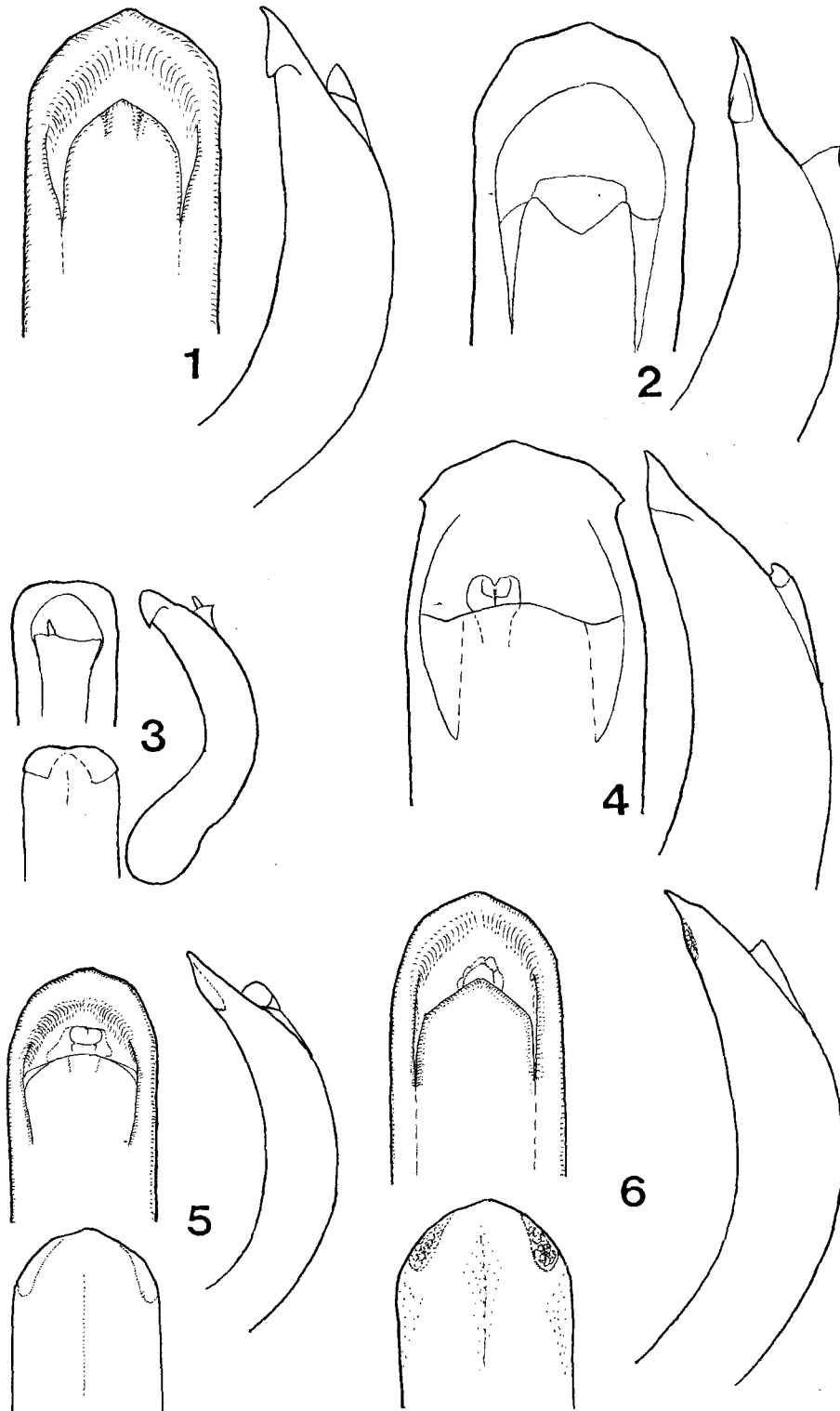


Figure 47: *Chrysolina* (*Chrysocrosita*), aedeagus: 1 — *Ch. sulcicollis sulcicollis* (*Chrysomela teichophila*, syntype, China: Khalgan), 2 — *Ch. sulcicollis przewalskyi* (lectotype, China: Inner Mongolia), 3 — *Ch. sogdiorum* (Kyrgyzstan), 4 — *Ch. alaschanica* (China: Alashan Mts.), 5 — *Ch. spectabilis* (Tuva), 6 — *Ch. nikolskyi nikolskyi* (Sakhalin Isl.). (Orig.)



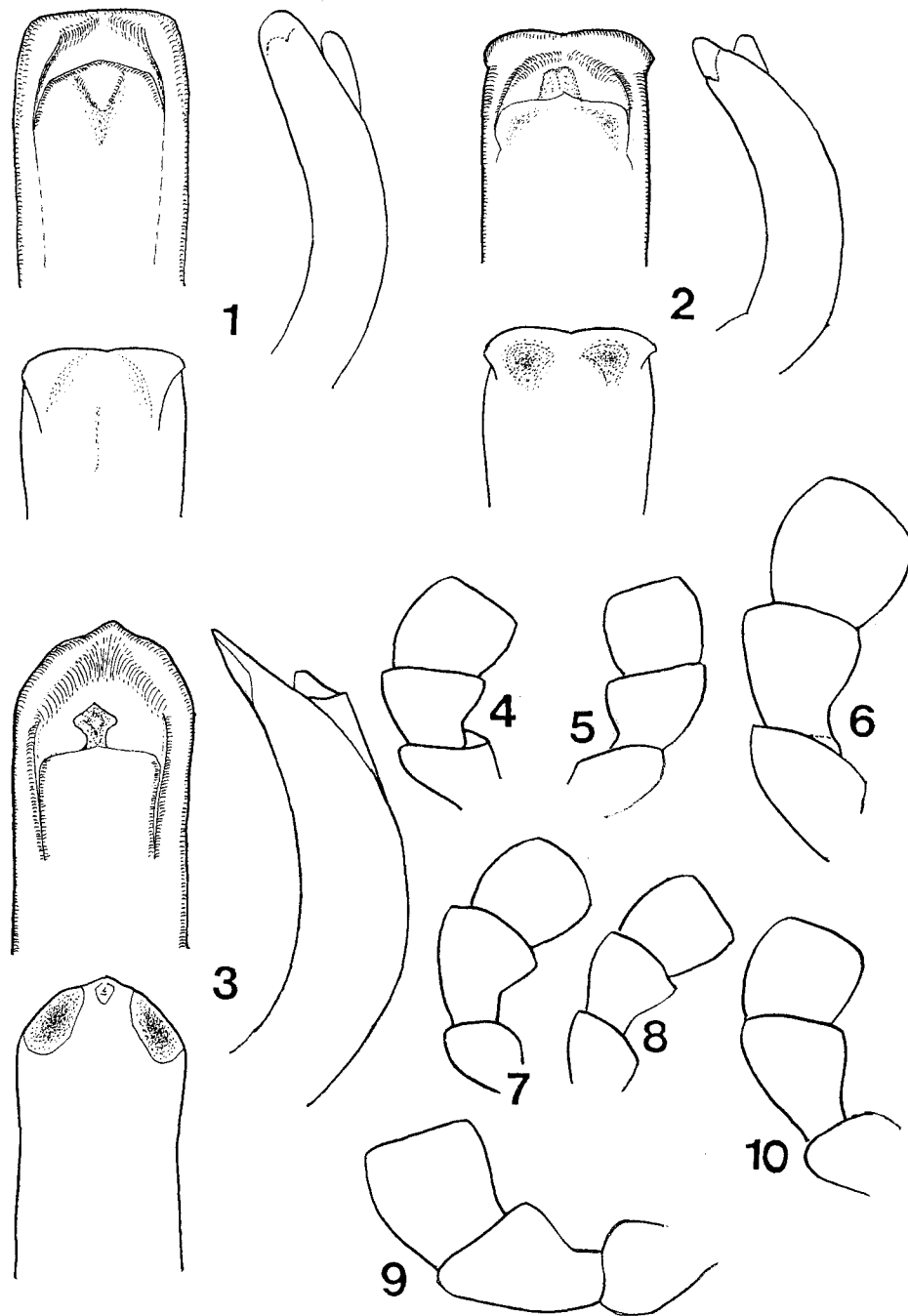


Figure 48: *Chrysolina* (*Chrysocrosita*): 1-3 — aedeagus, dorsal, ventral, and lateral view: 1 — *Ch. jakowlewi* (Yenisei valley), 2 — *Ch. rugulosa* (Tuva), 3 — *Ch. sulcicollis solida* (N. Korea); 4-10 — maxillary palpus: 4 — *Ch. jakowlewi*, male (Yenisei valley), 5 — *Ch. jakowlewi*, female (Yenisei valley), 6 — *Ch. alaschanica*, female (China: Alashan Mts.), 7 — *Ch. sogdiorum*, male (Kyrgyzstan), 8 — *Ch. sogdiorum*, female (Kyrgyzstan), 9 — *Ch. nikolskyi nikolskyi*, male (Sakhalin Isl.), 10 — *Ch. nikolskyi nikolskyi*, female (Sakhalin Isl.). (Orig.)

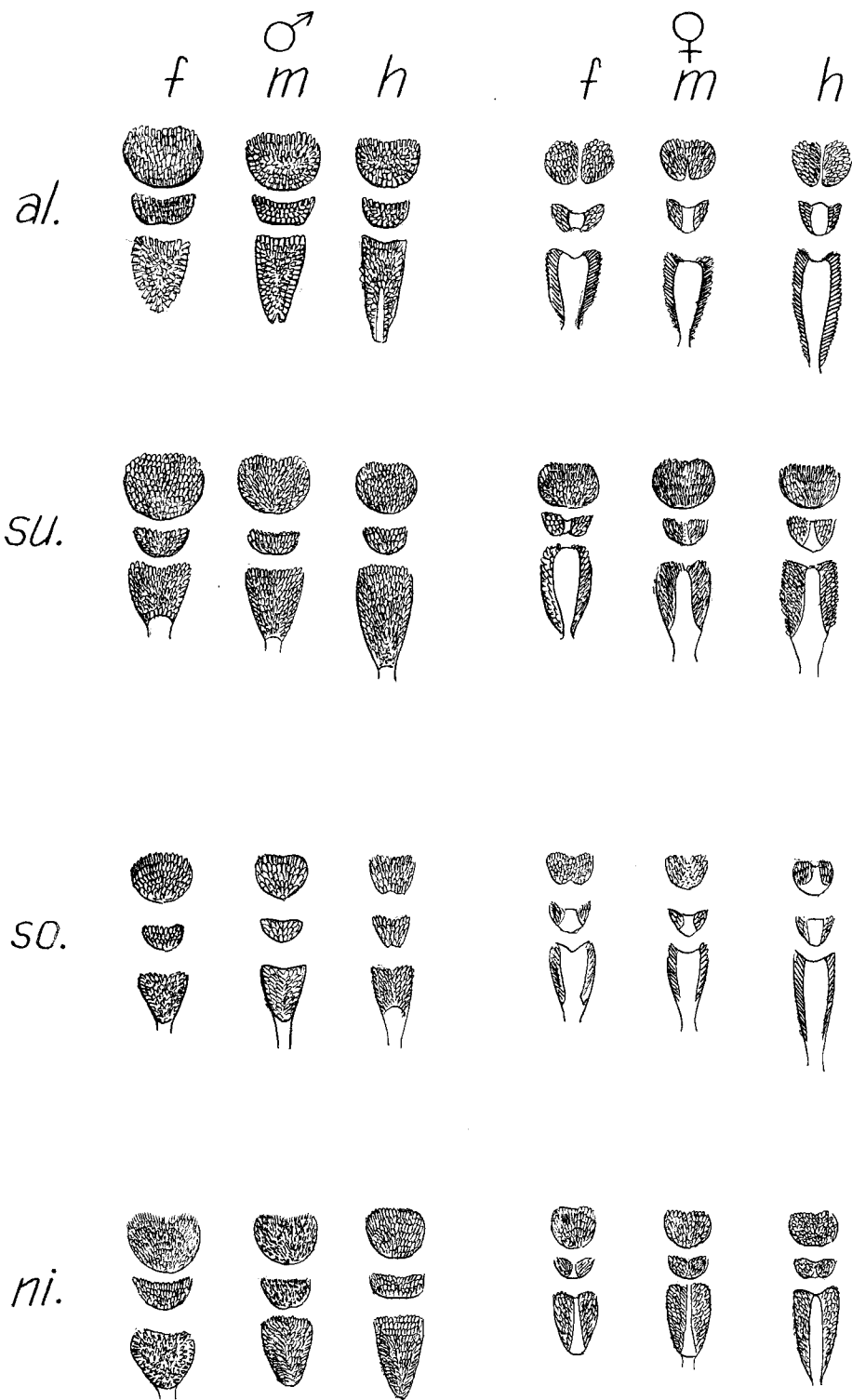


Figure 49: *Chrysolina* (*Chrysocrosita*): tarsal sole (f — fore-tarsus, m — mid-tarsus, h — hind-tarsus, al. — *Ch. alaschanica*, su. — *Ch. sulcicollis sulcicollis*, so. — *Ch. sogdiorum*, ni. — *Ch. nikolskyi nikolskyi*). (Orig.)

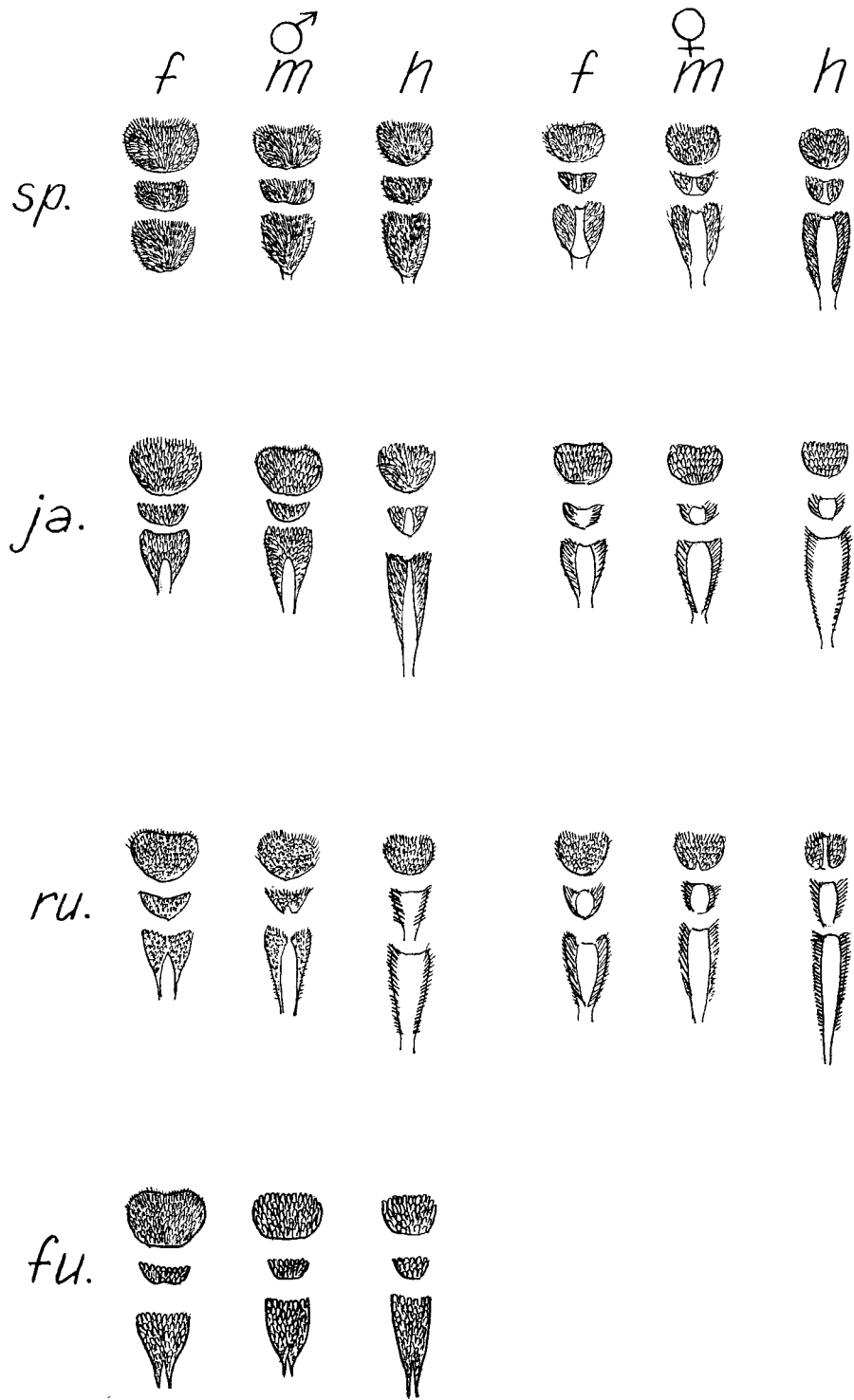


Figure 50: *Chrysolina* (*Chrysocrosita*): tarsal sole (f — fore-tarsus, m — mid-tarsus, h — hind-tarsus, sp. — *Ch. spectabilis*, ja. — *Ch. jakowlewi*, ru. — *Ch. rugulosa*, fu. — *Ch. fuyunica fuyunica*). (Orig.)

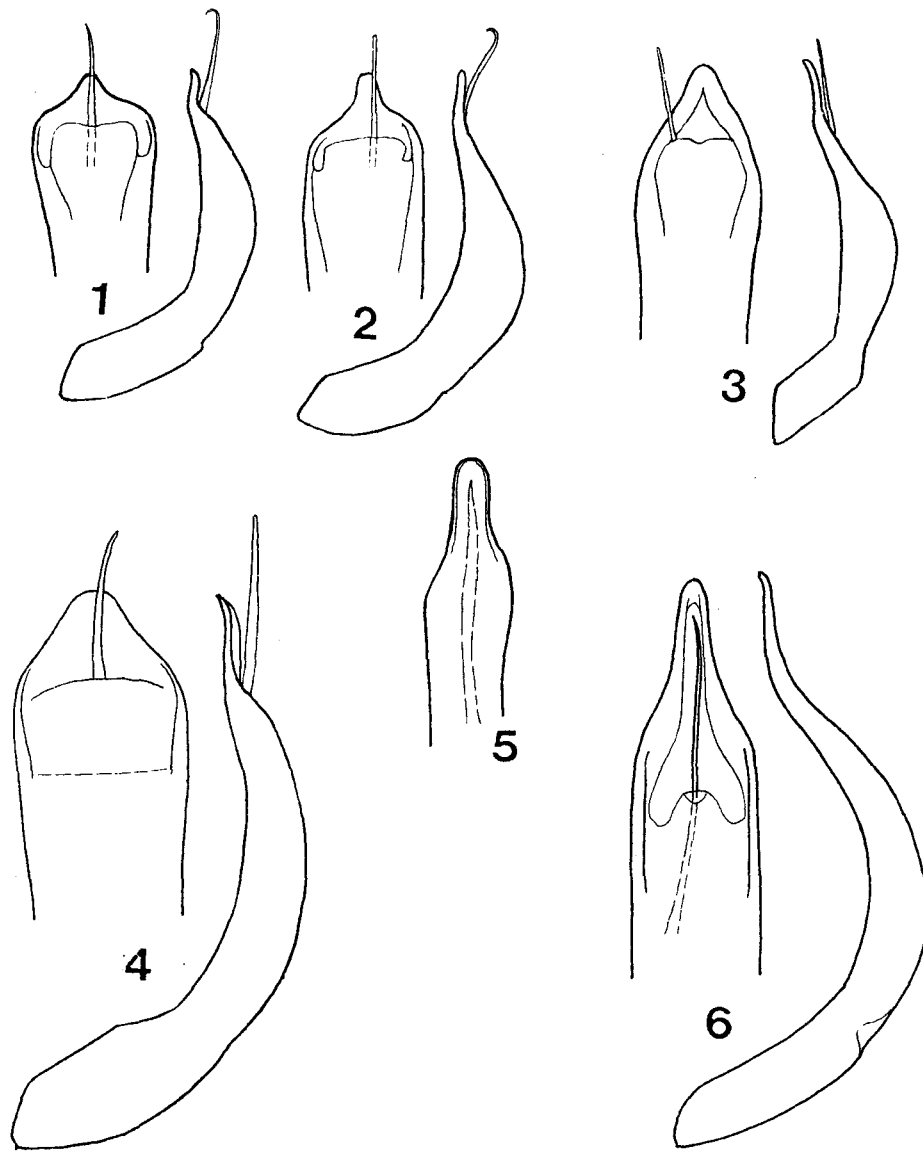


Figure 51: *Chrysolina* (*Chalcoidea*): 1-6 — aedeagus: 1 — *Ch. pusa* (Mongolia), 2 — *Ch. lopatini* (Irkutsk reg.), 3 — *Ch. brunnicornis bermani* (Chita reg.: Kodarskyi ridge), 4 — *Ch. rufilabris* (Transbaikalia), 5 — *Ch. carnifex melanaria*, neotype (S. France) (aedeagus immature and slightly folded longitudinally, ventral view), 6 — *Ch. carnifex coerulescens*, lectotype (Germany: Mainz). (Orig.)

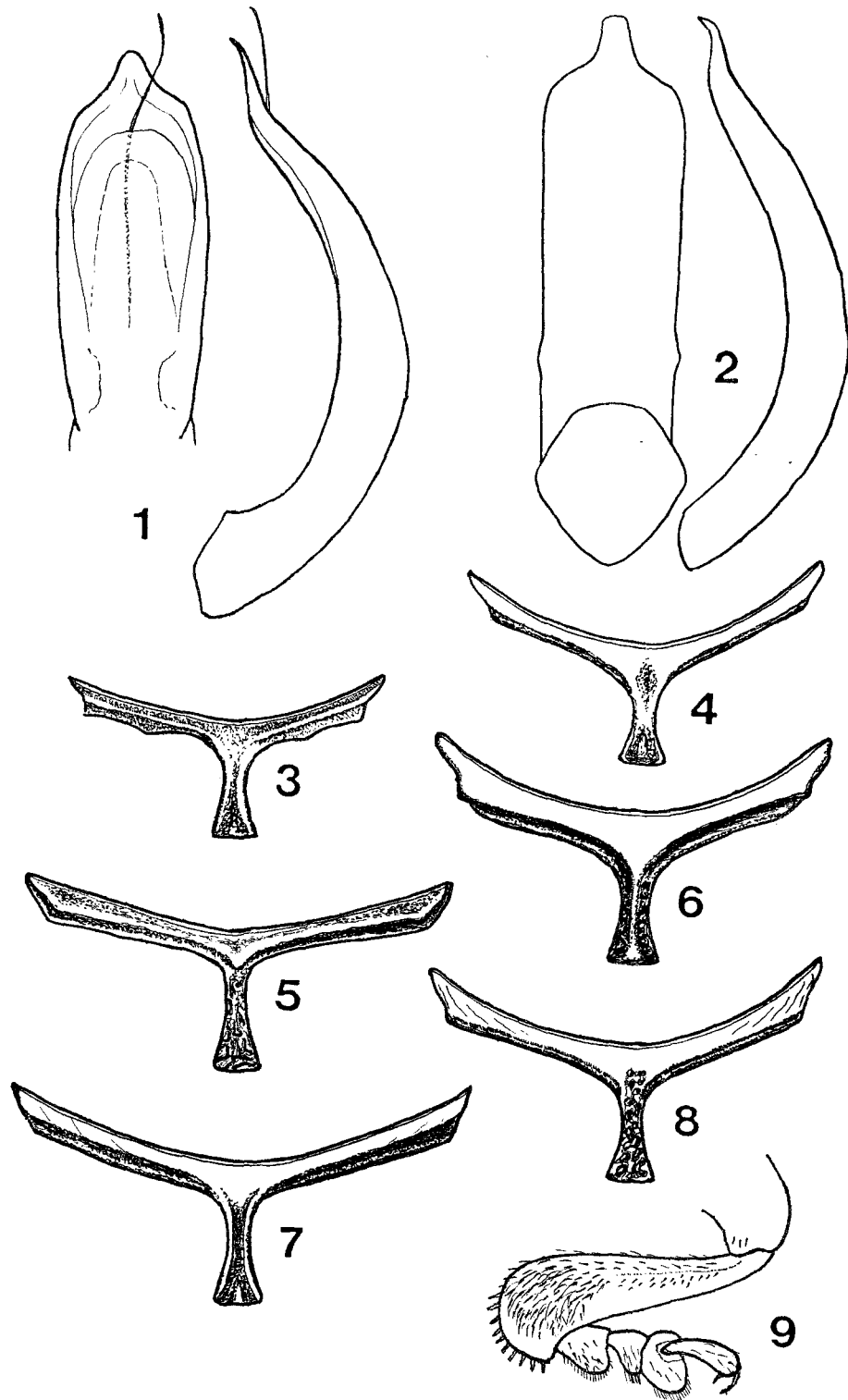


Figure 52: *Chrysolina* (*Chalcoidea*): 1-2 — aedeagus: 1 — *Ch. lucti* (China: Tibet), dorsal and lateral view, 2 — *Ch. sajanica*, ventral and lateral view; 3-8 — prosternum: 3 — *Ch. hudsonica*, male, 4 — *Ch. carnifex carnifex*, female, 5 — *Ch. zamotajlovi*, paratype, male, 6 — *Ch. interstincta subseriata*, female, 7 — *Ch. superstes superstes*, male, 8 — *Ch. immarginata*, female; 9 — *Ch. rufilabris*, male, fore-tibia and tarsus (Transbaikalia). (Orig.)

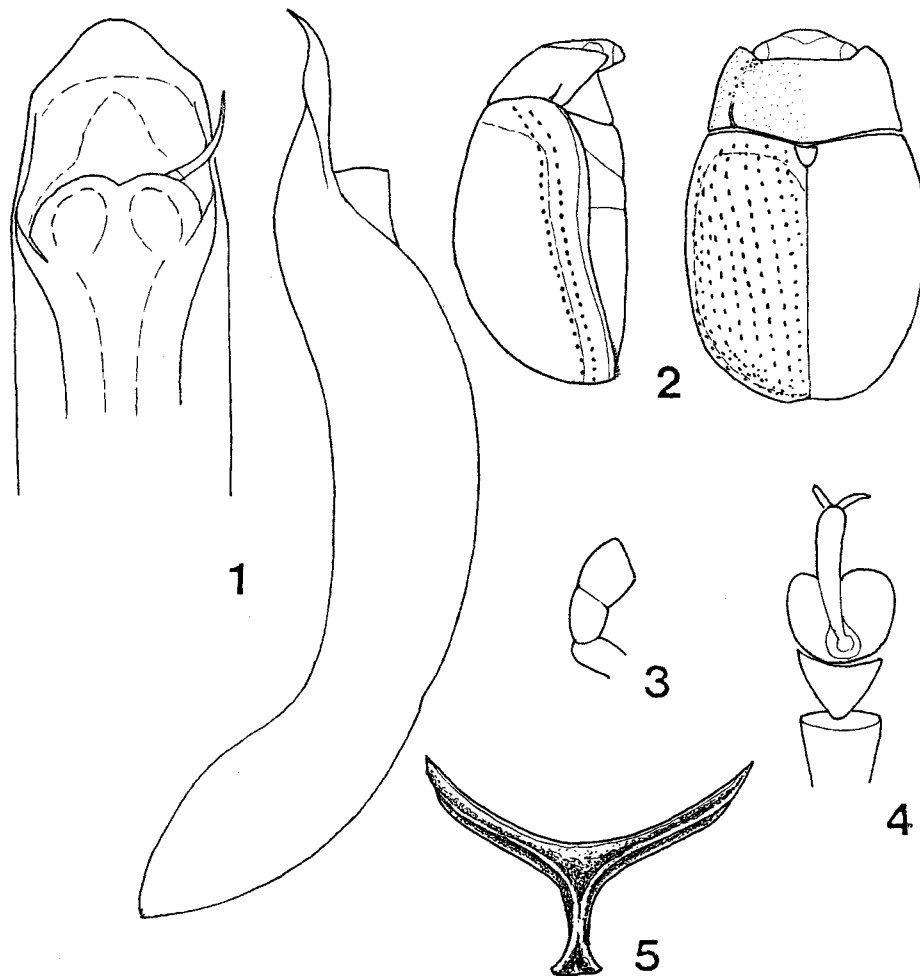


Figure 53: *Chrysolina (Chalcoidea) taygetana*, male (Greece: Taigeto Mts.): 1 — aedeagus, dorsal and lateral view, 2 — general view, dorsal and lateral, 3 — maxillary palpus, 4 — fore-tarsus, 5 — prosternum. (Orig.)

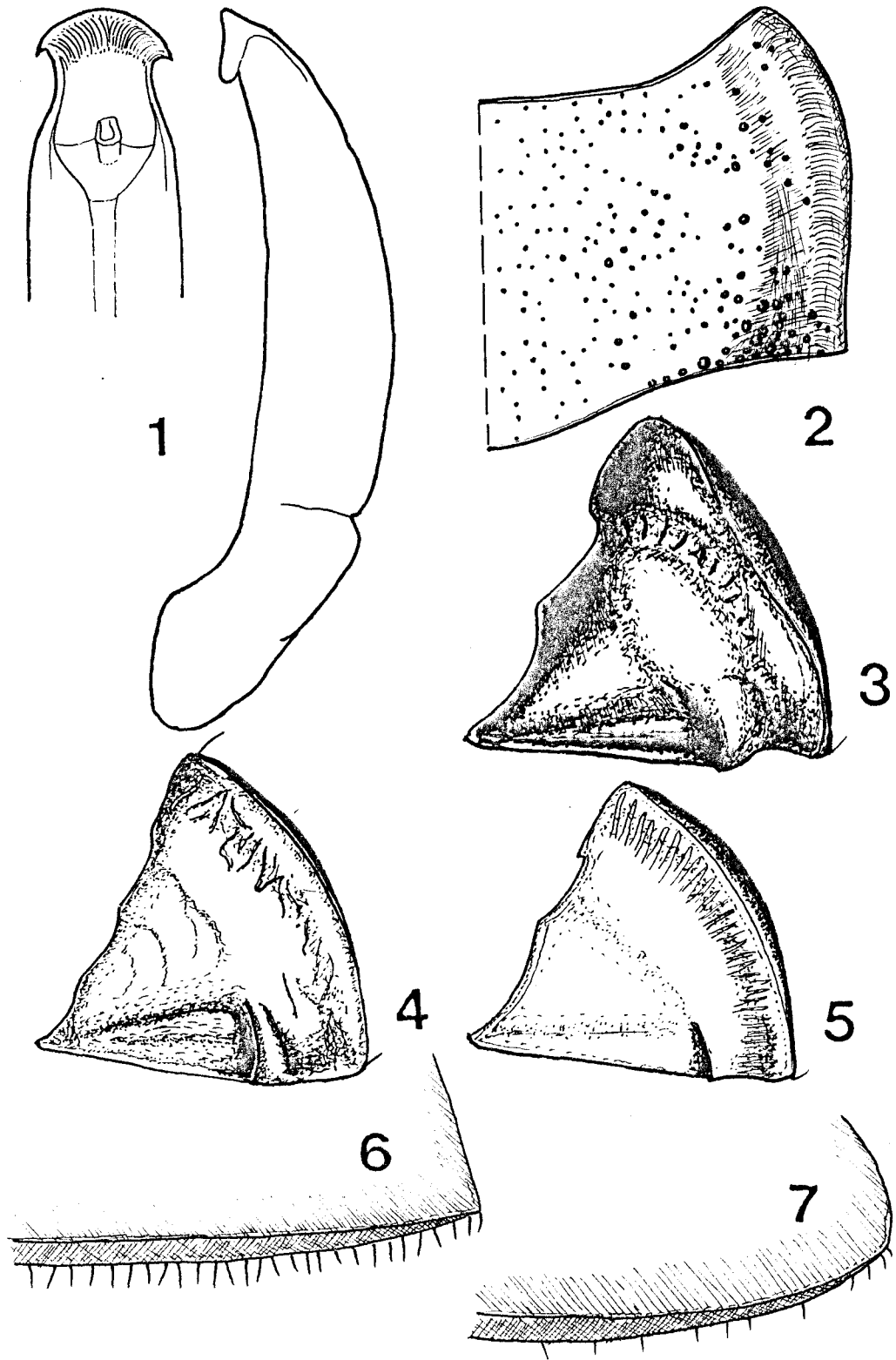


Figure 54: *Chrysolina* (*Anopachys*): 1-2 — *Ch. aurichalcea*, male (*Chrysolina elevata* Suffrian, lectotype, England): 1 — aedeagus, dorsal and lateral view, 2 — pronotum; 3-5 — prothoracic hypomera: 3 — *Ch. asclepiadis asclepiadis*, female (Switzerland), 4 — *Ch. schatzmayri*, female, topotype (Grado), 5 — *Ch. relucens*, female (White Sea shore); 6-7 — elytral apex, lateral view: 6 — *Ch. aurichalcea*, male (Moscow reg.), 7 — *Ch. asclepiadis bohémica*, female (Chelyabinsk reg.). (Orig.)

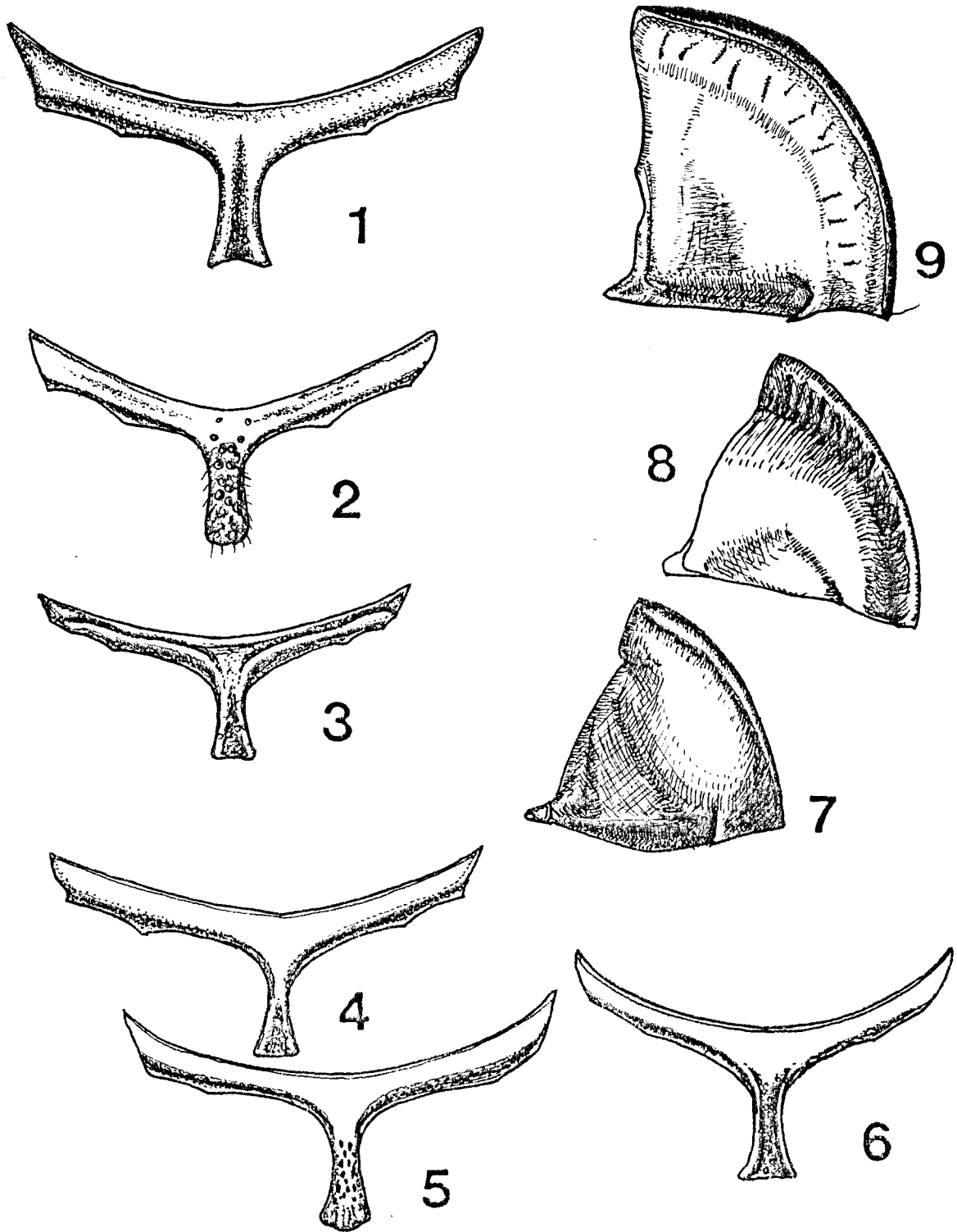


Figure 55: 1, 9 — *Chrysolina (Apterosoma) angusticollis*, male (Hokkaido): 1 — prosternum, 9 — prothoracic hypomera; 2-8 — *Chrysolina (Arctolina)*: 2-6 — prosternum: 2 — *Ch. subsulcata*, male (Wrangel Isl.), 3 — *Ch. septentrionalis*, male (Laptev Sea shore: Olenek Bay), 4 — *Ch. cyanella*, male (Altai), 5 — *Ch. saurica*, male, topotype (Tien Shan: Saur ridge), 6 — *Ch. ballioni*, male (S.-E. Kazakhstan); 7-8 — prothoracic hypomera: 7 — *Ch. septentrionalis*, male (Laptev Sea shore: Olenek Bay), 8 — *Ch. bungei*, male (Taimyr Penins.). (Orig.)



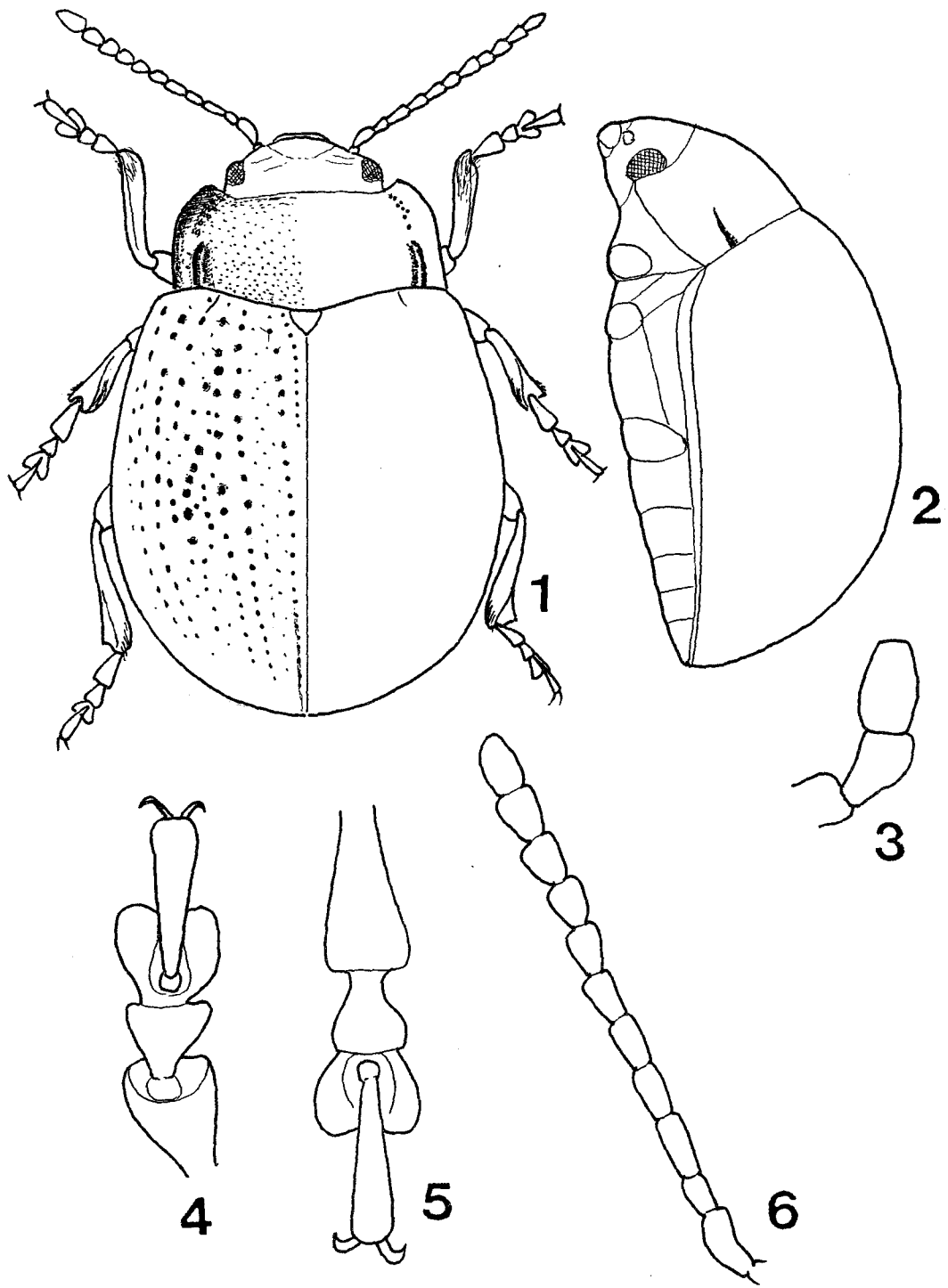


Figure 56: *Chrysolina (Bechynia) philotesia*, female (Greece: Peloponnesus): 1 — dorsal view, 2 — lateral view, 3 — maxillary palpus, 4 — fore-tarsus, 5 — hind-tarsus, 6 — antenna. (Orig.)

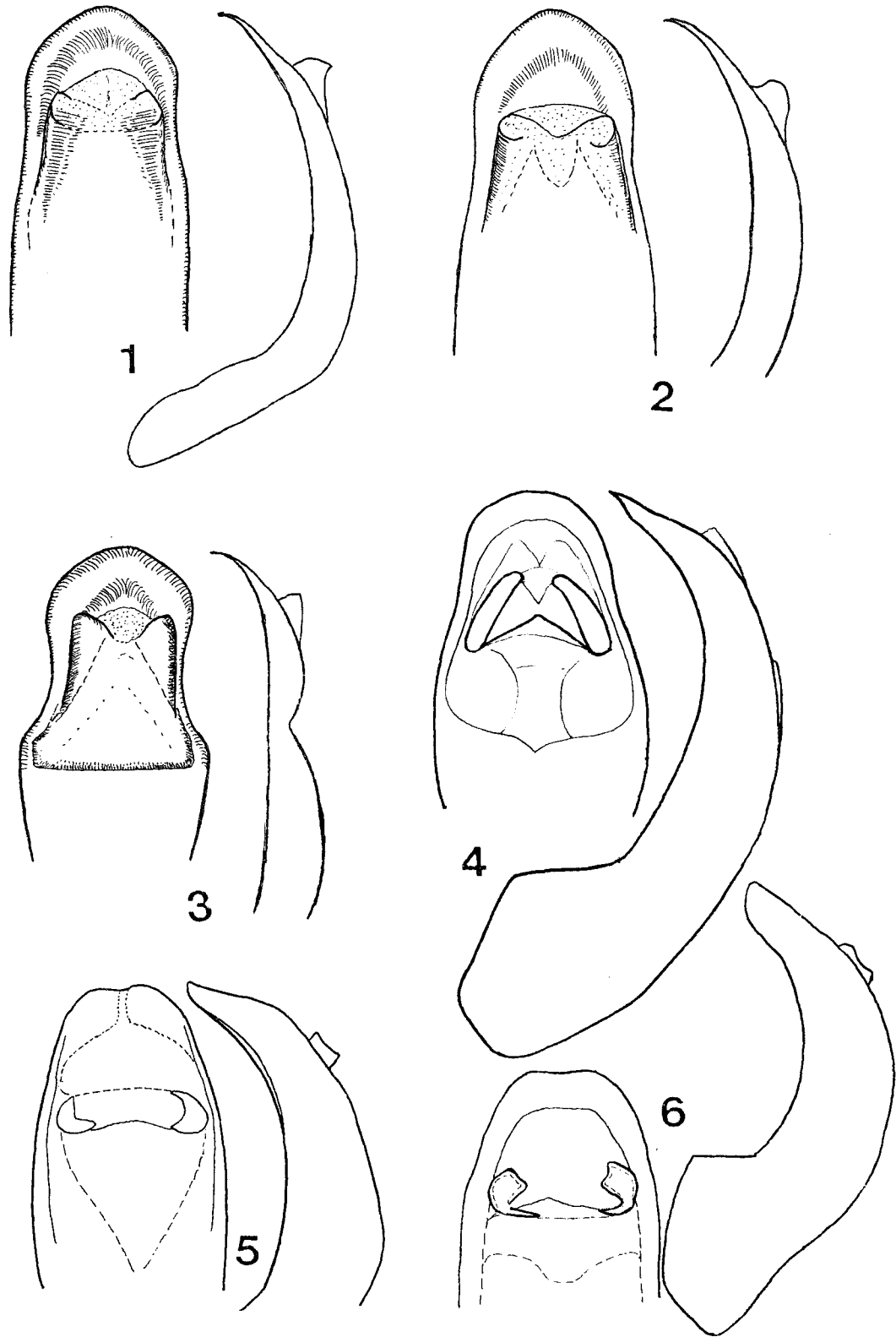


Figure 57: 1-3 — *Chrysolina (Arctolina) borochorensis*, variability of aedeagus in the specimens from the same locality (China: Narat ridge, Bayantal river); 4-6 — *Ch. (Arctolina) tundralis*, aedeagus: 4 — male from S. Urals: Malyj Iremel Mt., 5 — male from S. Taimyr: 2 km W Ladannakh lake, 6 — male from Irkutsk reg.: Nizhne-Ilimsk. (Orig.)

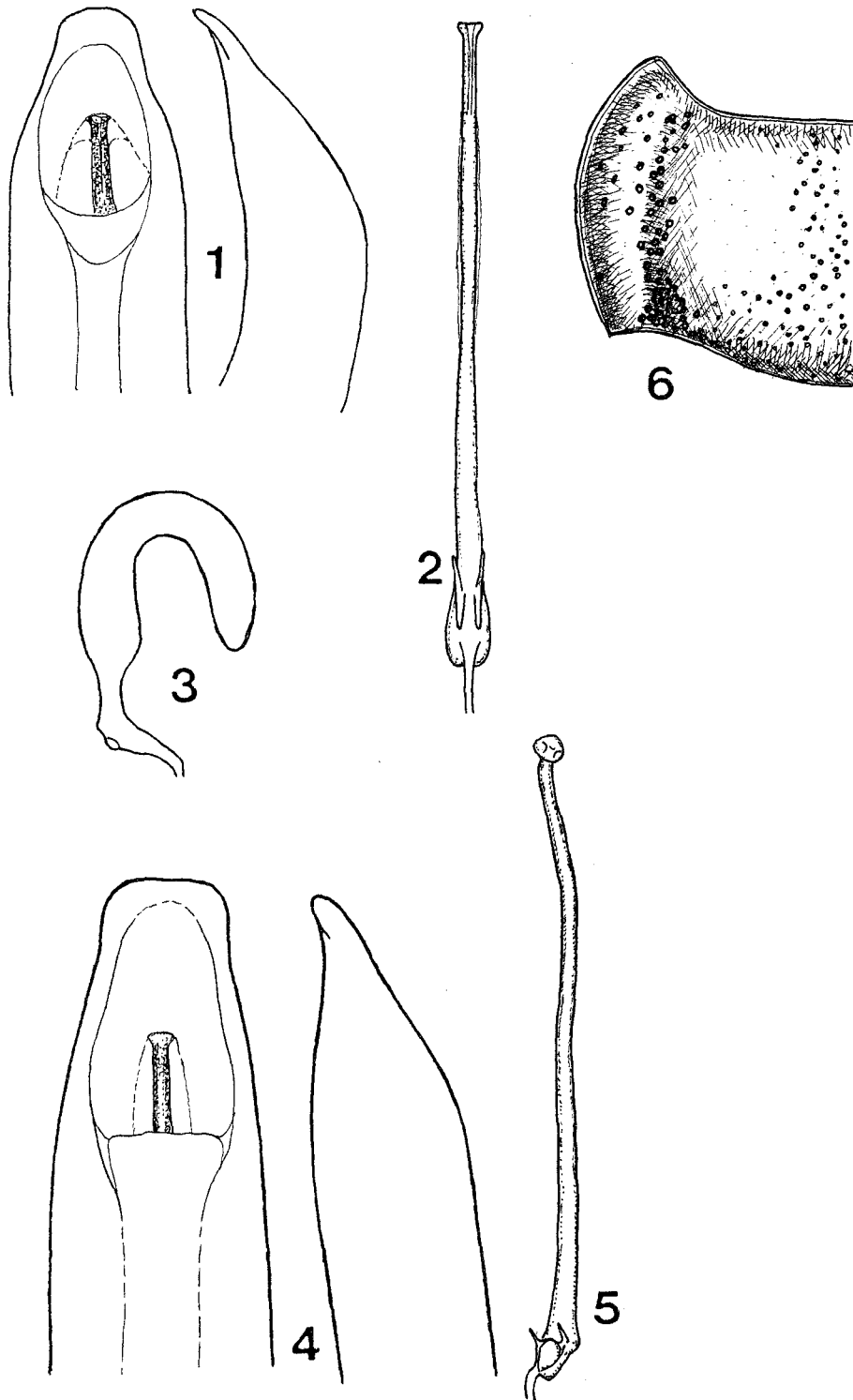


Figure 58: *Chrysolina (Anopachys) watanabei*: 1, 2 — male from Manchuria (Vetka): 1 — aedeagus, 2 — flagellum; 3 — female, paratype (Hokkaido: Sapporo), spermatheca; 4, 5 — male, topotype (Hokkaido: Sapporo): 4 — aedeagus, 5 — flagellum; 6 — female, paratype (Hokkaido: Sapporo), pronotum. (Orig.)

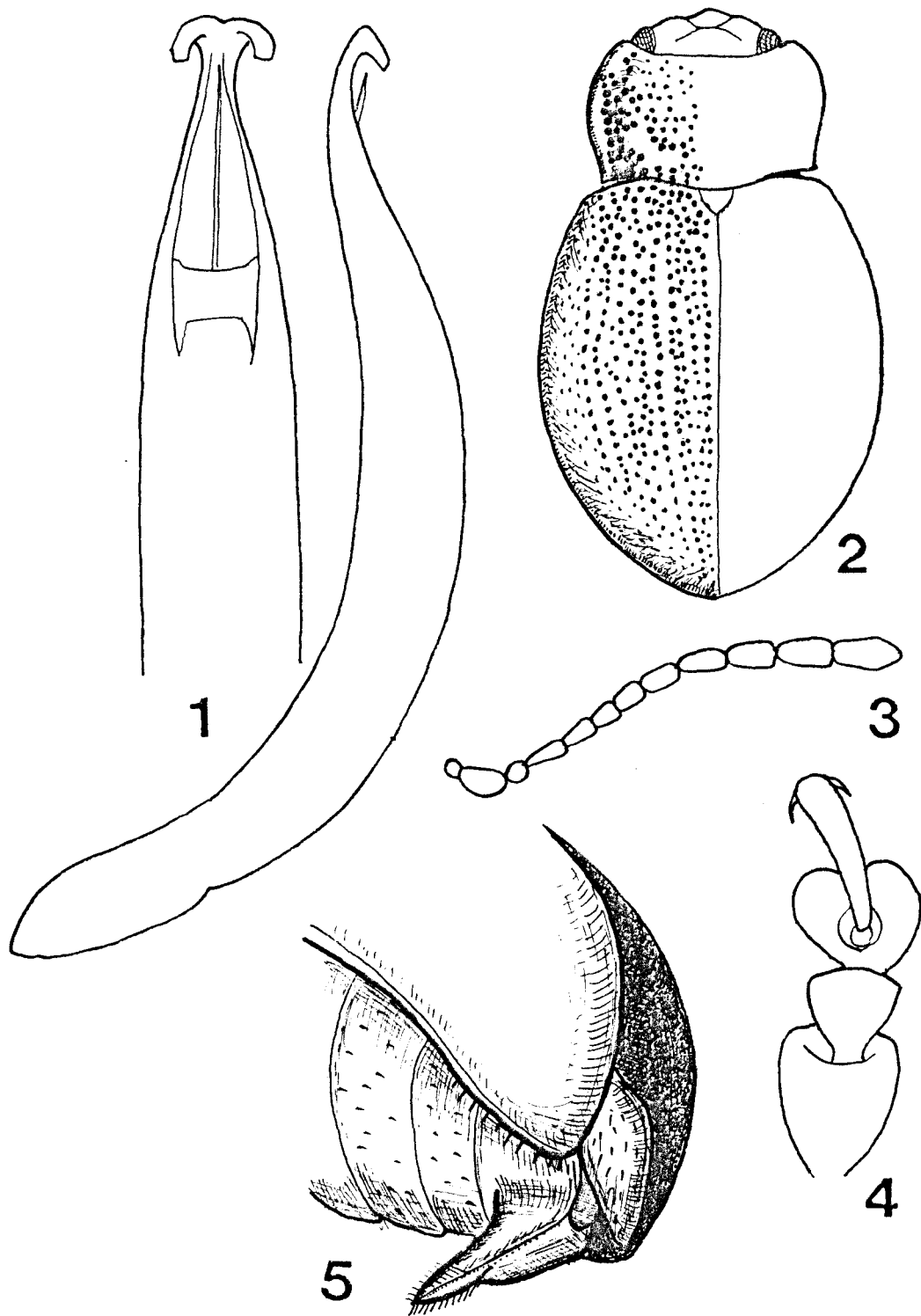


Figure 59: *Chrysolina (Apterosoma) porosirensis*: 1-4 — male (Hokkaido): 1 — aedeagus, dorsal and lateral view, 2 — dorsal general view; 3 — antenna, 4 — fore-tarsus; 5 — female, paratype (Hokkaido: Porosiri Mt.), apex of abdomen with ovipositor. (Orig.)

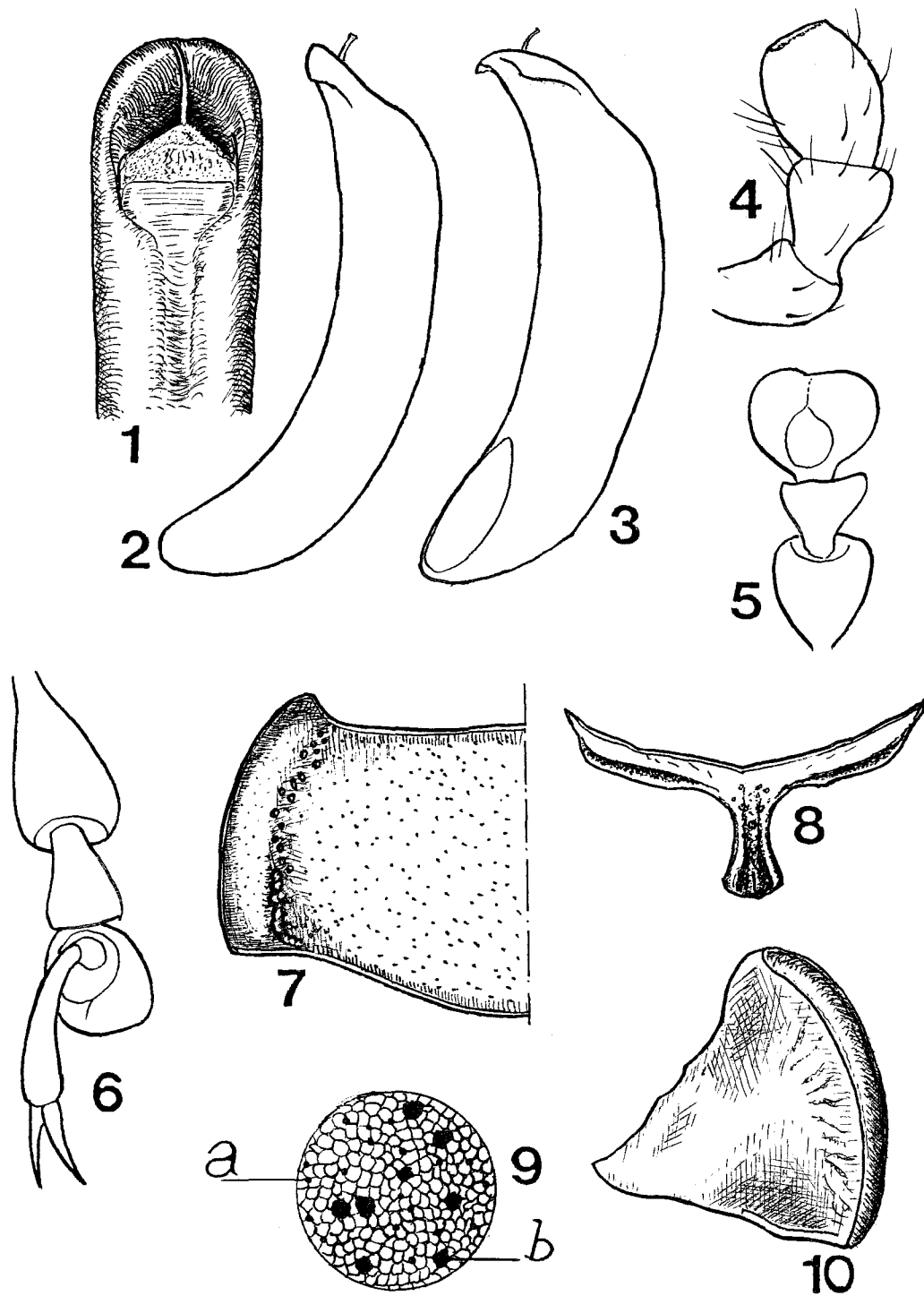


Figure 60: *Chrysolina (Allohypericia) mauroi*, male, holotype (China: Sichuan: Kangding): 1-3 — aedeagus: 1 — dorsal view, 2 — lateral view, 3 — ventro-lateral view; 4 — maxillary palpus; 5 — fore-tarsus; 6 — hind-tarsus; 7 — pronotum; 8 — prosternum; 9 — microsculpture of pronotum (a — punctules, b — punctures); 10 — prothoracic hypomera. (Orig.)

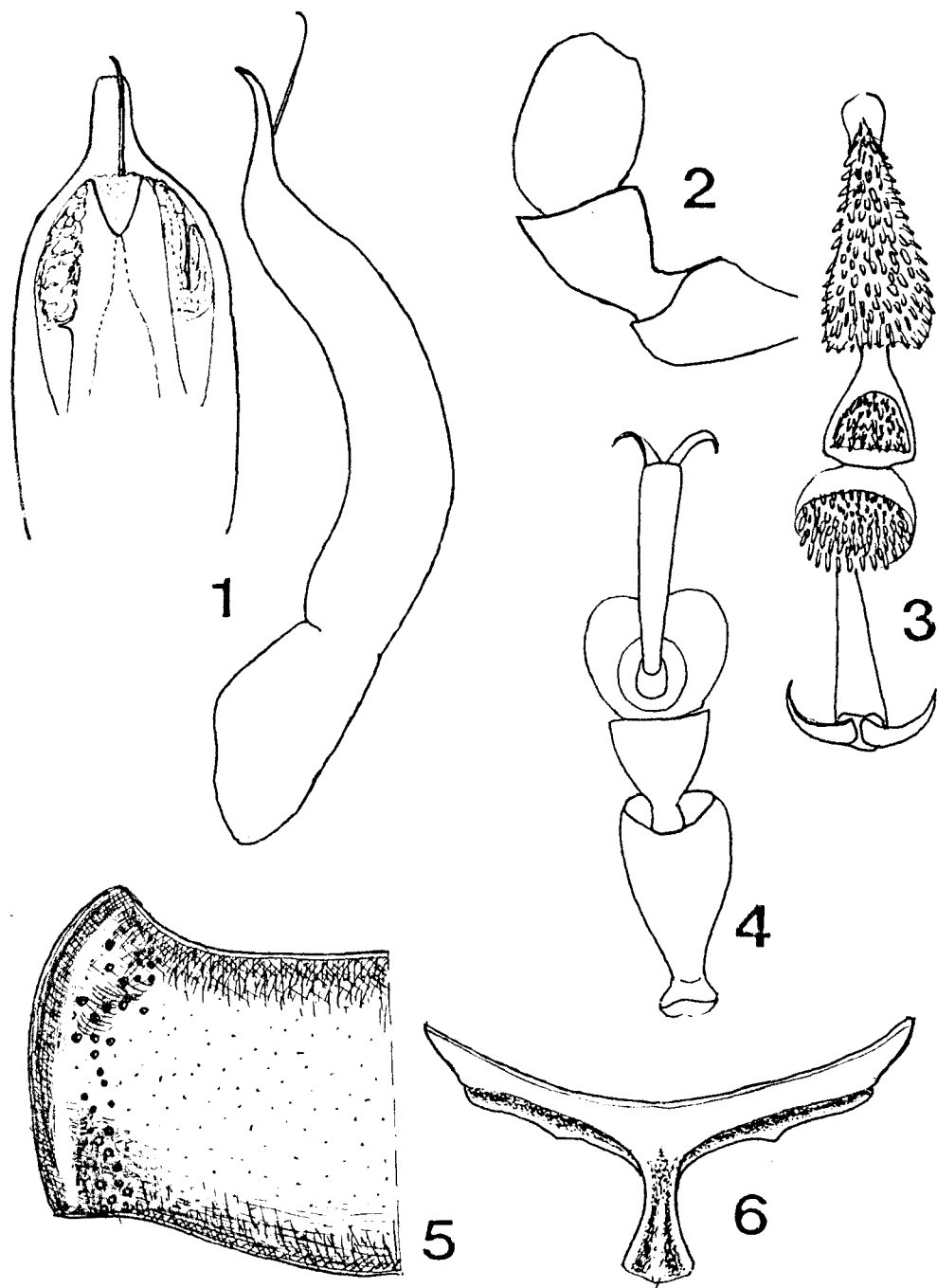


Figure 61: *Chrysolina (Chalcoidea) brahma*, male, paratype (India: Chini, Bashahr State): 1 — aedeagus, dorsal and lateral view, 2 — maxillary palpus, 3 — hind-tarsus, ventral view, 4 — fore-tarsus, dorsal view, 5 — pronotum, 6 — prosternum. (Orig.)

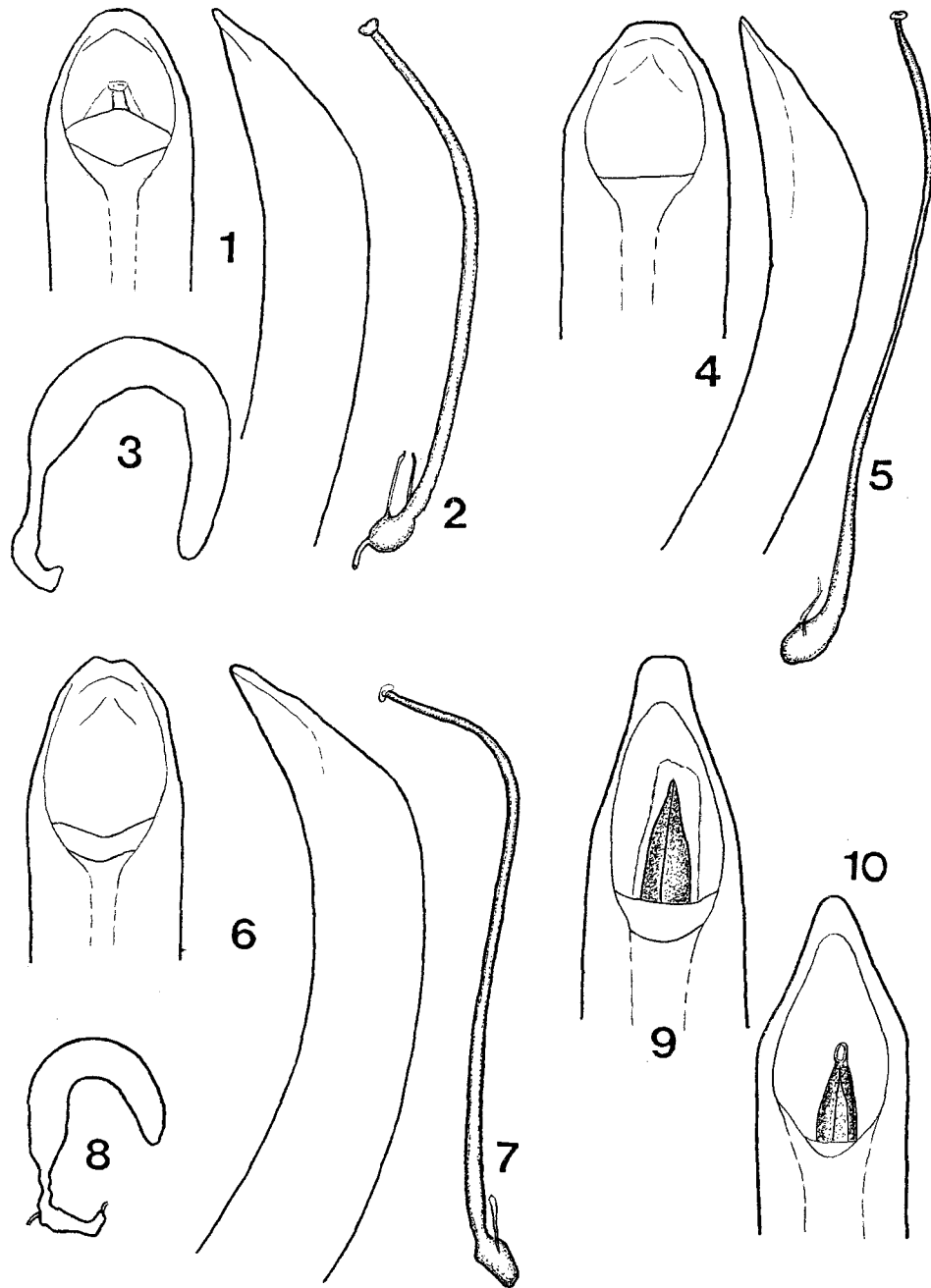


Figure 62: *Chrysolina* (*Anopachys*): 1-8 — *Ch. watanabei*: 1-2 — male, aedeagus and flagellum (Primorski Krai: Lazovsky Distr.), 3 — female, spermatheca (Primorski Krai: Lazovsky Zapovednik), 4-5 — male, aedeagus (flagellum is extracted) and flagellum (Primorski Krai: Suvorovo Vill.), 6-7 — male, aedeagus (flagellum is extracted) and flagellum (Sikhote Alin), 8 — female from the same locality, spermatheca; 9-10 — *Ch. lineigera*, male, aedeagus: 9 — from Sikhote Alin, 10 — from Amur reg.: Miao-Chan ridge. (Orig.)

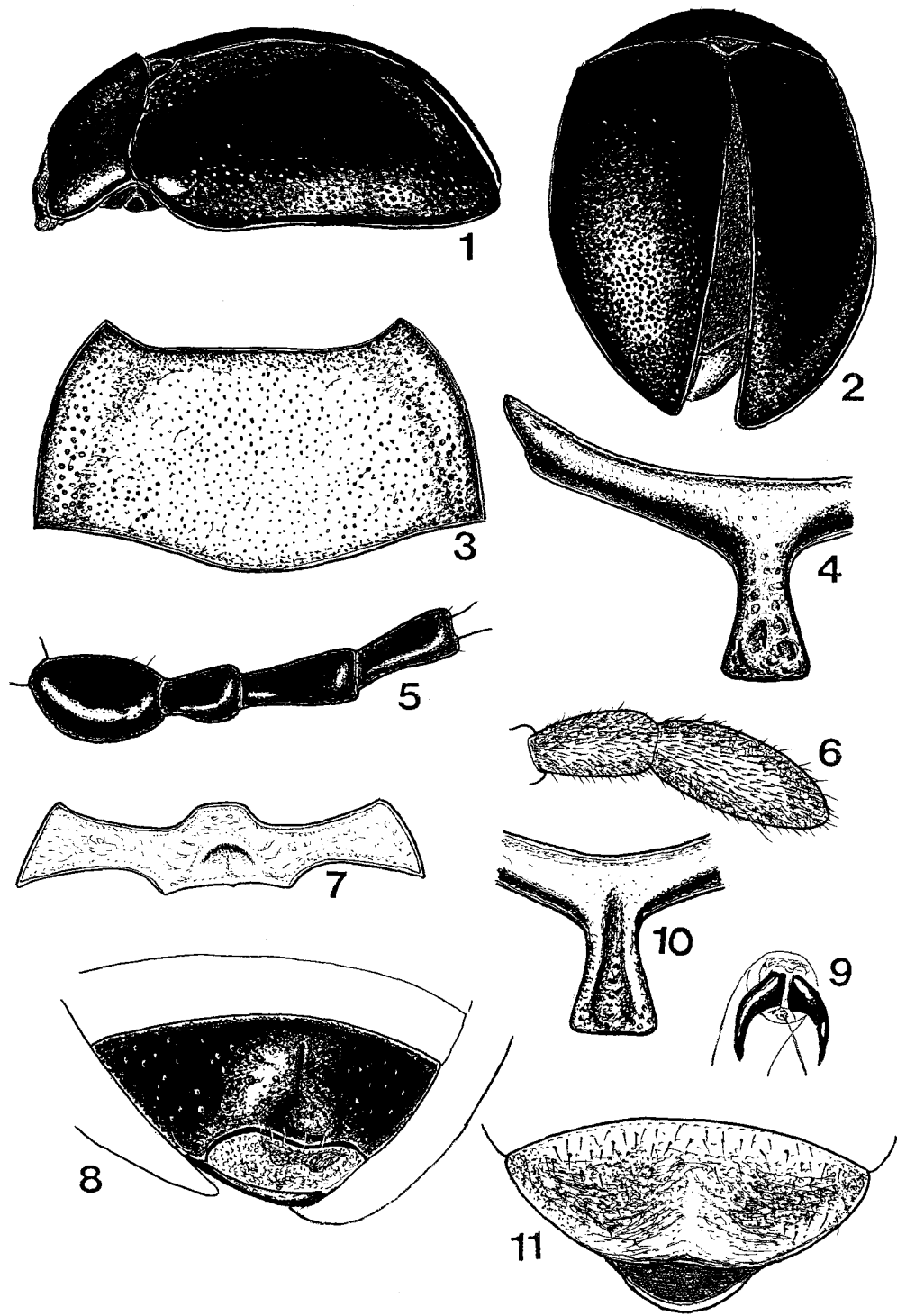


Figure 63: *Chrysolina (Anopachys) koreana*: 1-9 — male, holotype (Korea: Konro-Hô, Mt. Kongô-Zan, Kôgen-Dô): 1 — lateral view, 2 — elytra, posterior view, 3 — pronotum, 4 — prosternum, 5 — 1st-4th antennomeres, 6 — 10th-11th antennomeres, 7 — metasternum, 8 — last abdominal sternite, 9 — claws of fore-tarsus; 10-11 — female, paratype (Korea: Konro-Hô, Mt. Kongô-Zan, Kôgen-Dô): 10 — prosternum, 11 — last abdominal sternite. (Orig.)



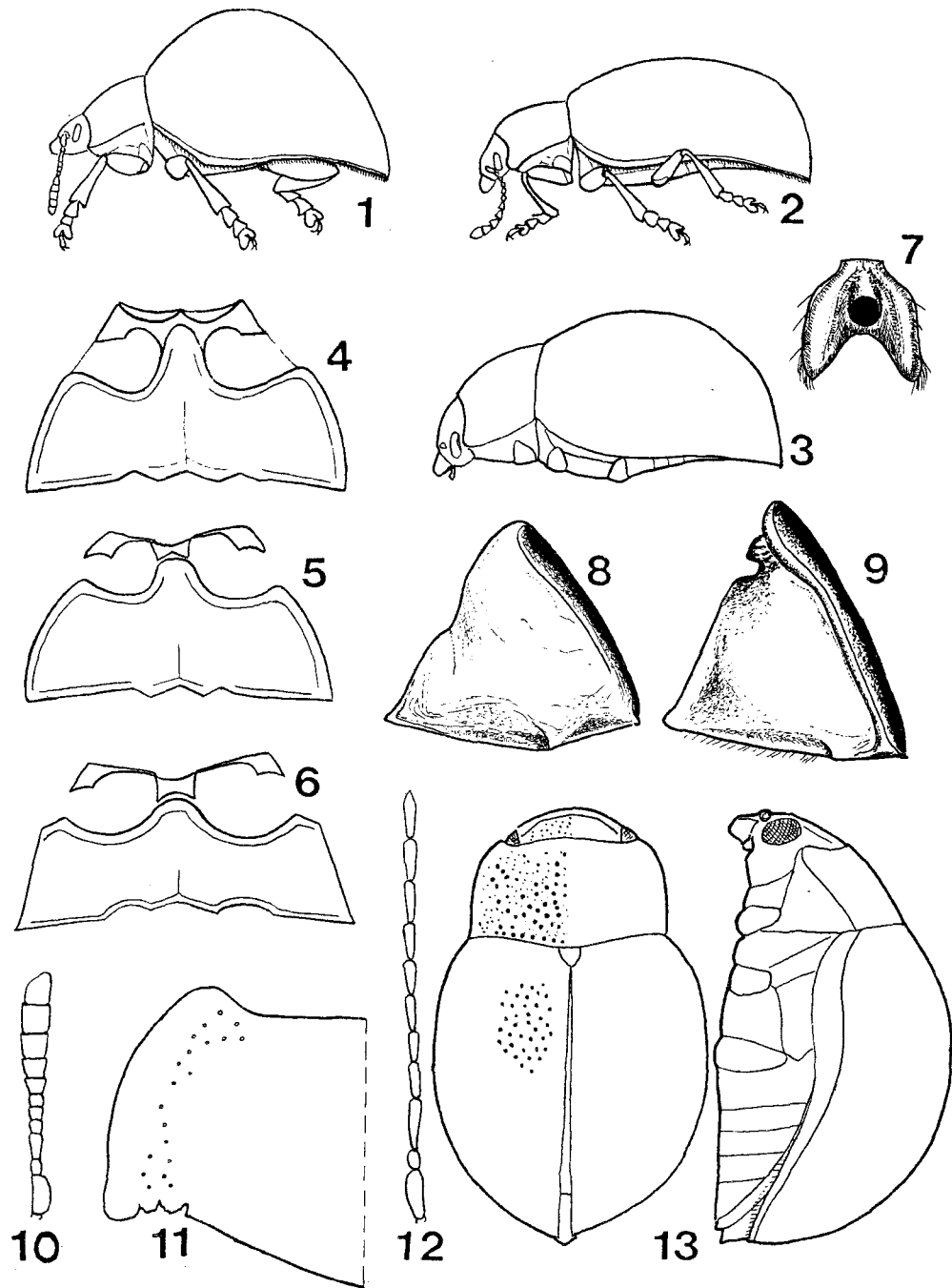


Figure 64: 1 — *Sphaerolina rajah* (India); 2 — *Humba cyanicollis*; 3 — *Sphaeratrix latifrons* (Ethiopia); 4-6 — meso- and metasternum: 4 — *Agroteomela indica*, 5 — *Sphaeratrix latifrons*, 6 — *Cyrtonus ruficornis*; 7 — *Crosita altaica* (Kazakhstan), metatarsomere 3, dorsal view; 8-9 — prothoracic hypomeron: 8 — *Sphaerolina balyi* (India: Madurai), 9 — *Humba cyanicollis* (China: Yunnan); 10 — *Sphaerolina rajah*, antenna; 11 — *Cyrtonus rotundatus* (France), pronotum; 12 — *Agroteomela indica*, antenna; 13 — *Timarchomima longicornis*, male, holotype (India: Pondichery). (Orig.)

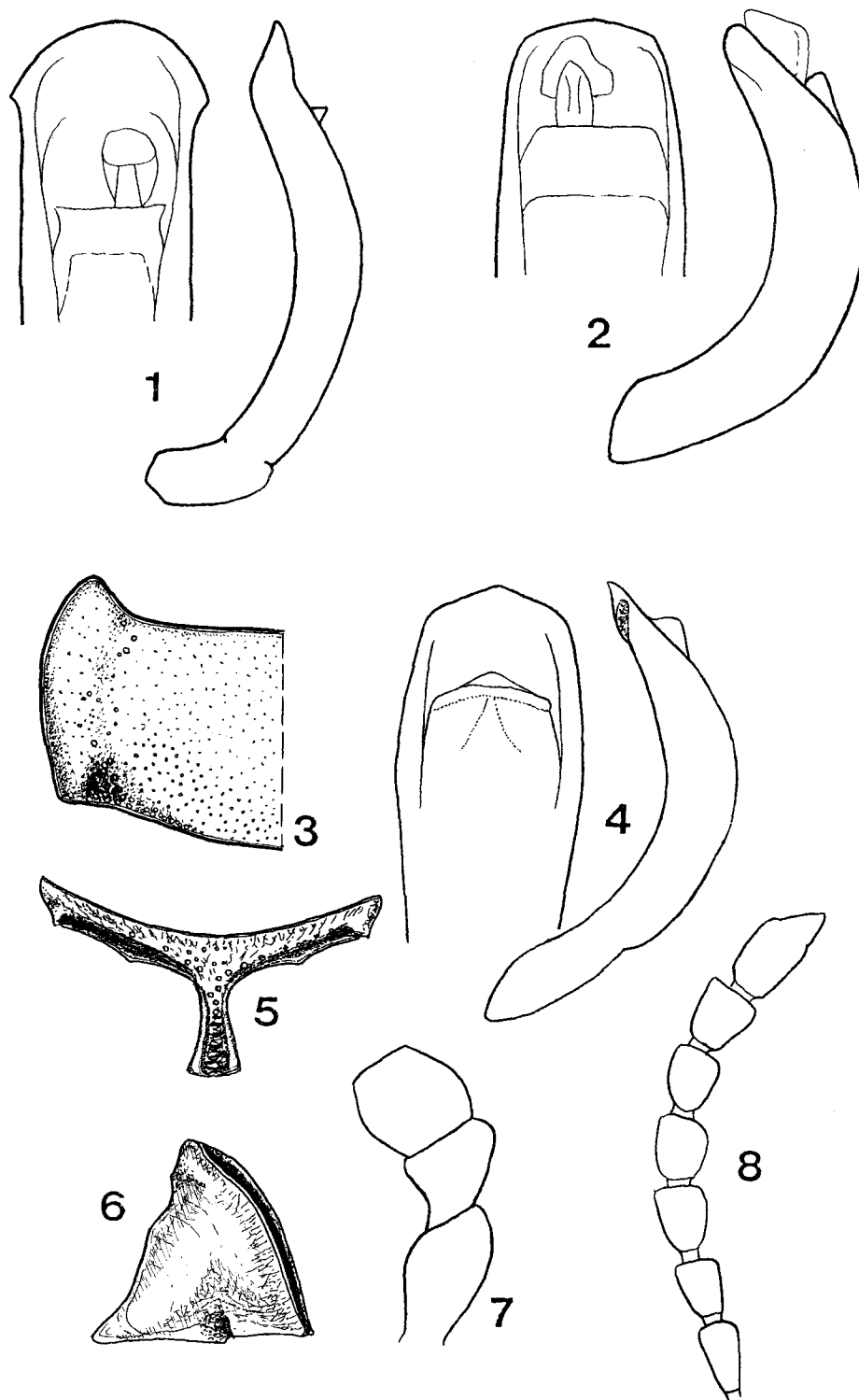


Figure 65: 1-2 — *Chrysolina (Chrysocrosita) nikolskyi sutschanica*, males (Primorski Krai: S. Sikhote Alin, Oblachnaya Mt.), aedeagus, infrapopulational variability; 3-8 — *Ch. (Chrysocrosita) fuyunica fuyunica*, male, syntype (China: Xinjiang Uygur Autonomous Region): 3 — pronotum, 4 — aedeagus, 5 — prosternum, 6 — prothoracic hypomeron, 7 — maxillary palpus, 8 — antennomeres 5-11. (Orig.)

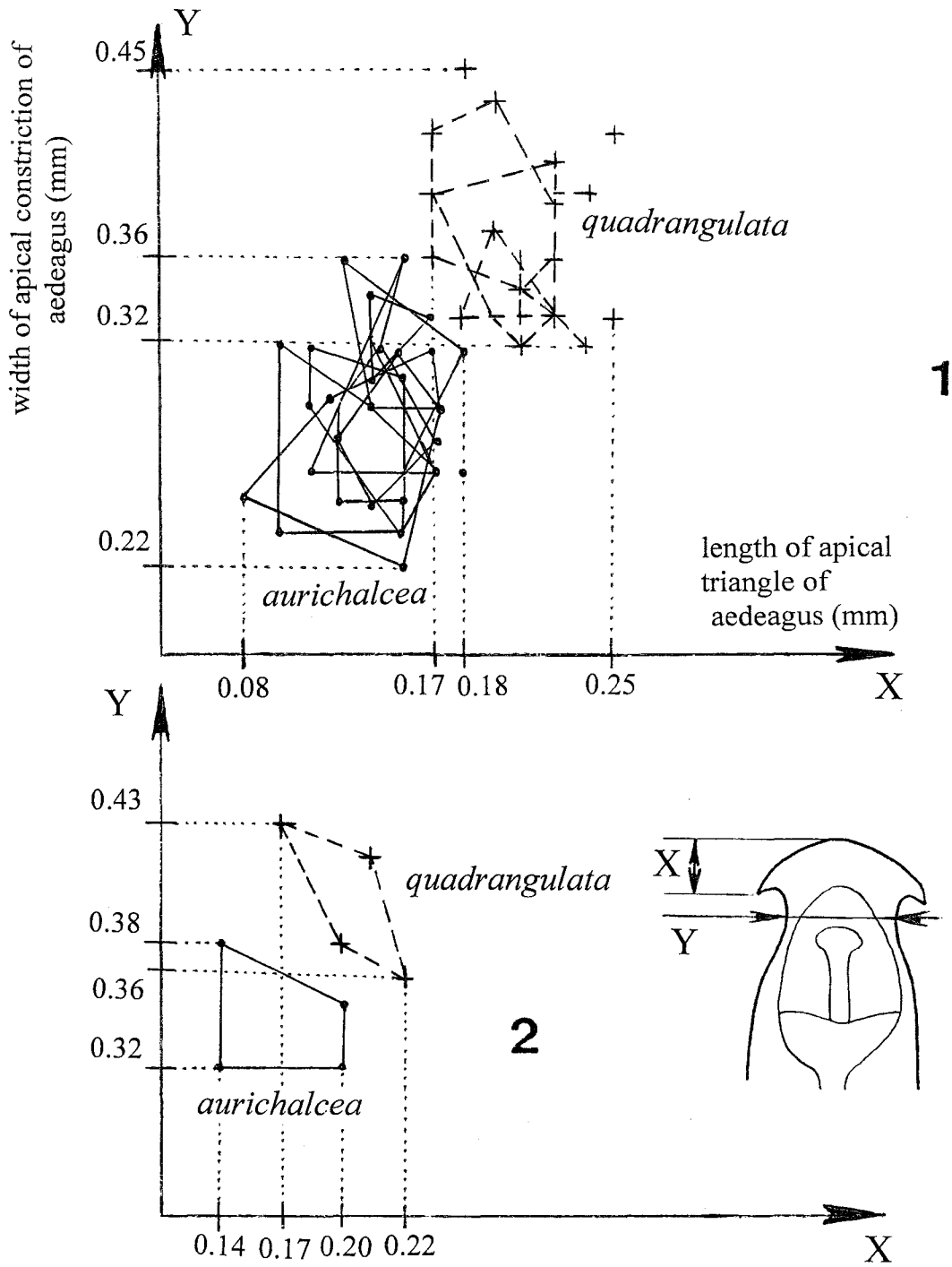


Figure 66: Aedeagus proportions in *Chrysolina (Anopachys) aurichalcea* and *Ch. (Anopachys) quadrangulata*: 1 — from Altai, Tuva, Sayans, Transbaikalia, and Mongolia (*aurichalcea*: 97 males from 28 localities; *quadrangulata*: 34 males from 13 localities), 2 — from Yakutia (*aurichalcea*: 10 males from 2 localities; *quadrangulata*: 4 males from 1 locality). (Orig.)

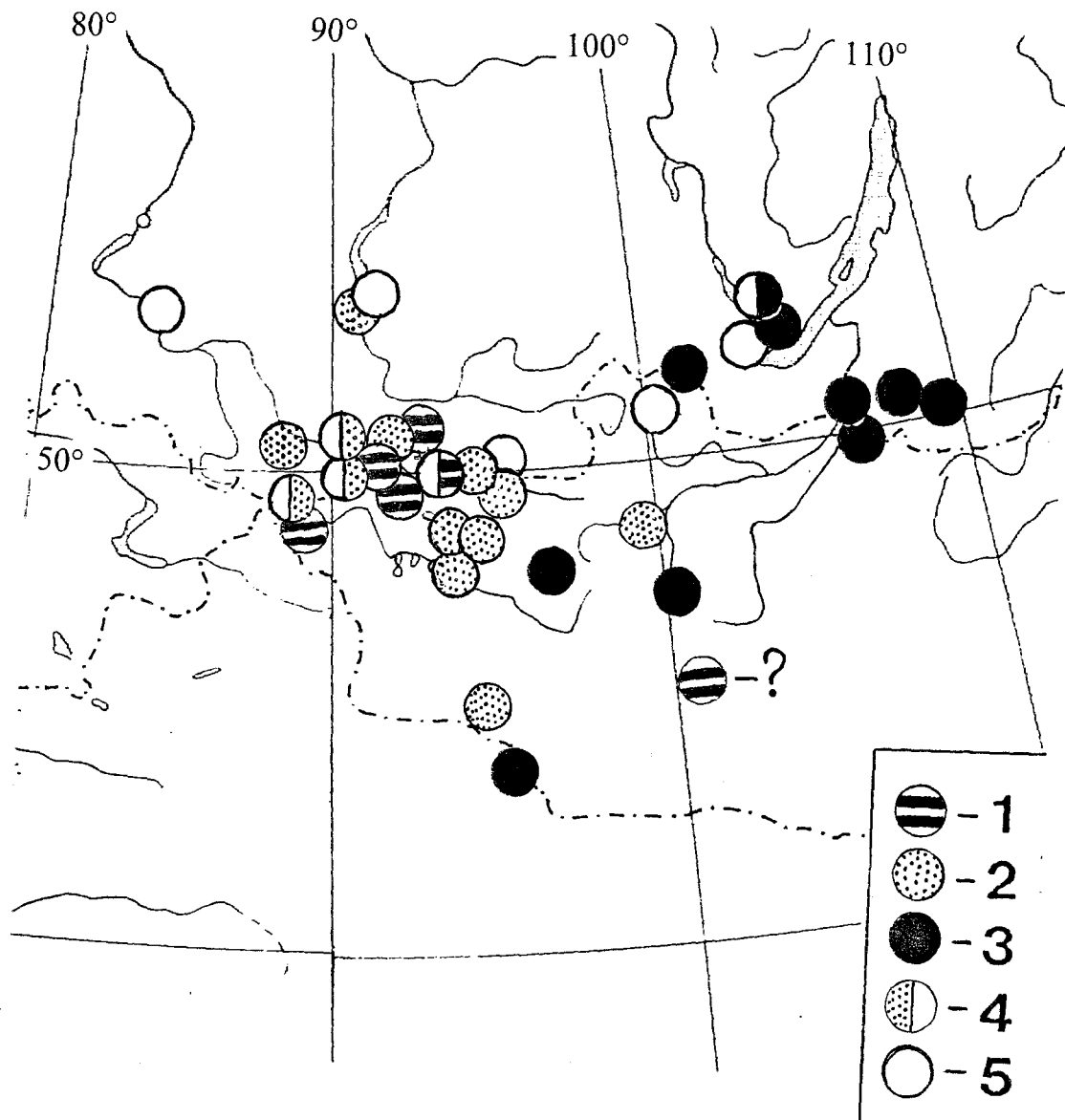


Figure 67: *Chrysolina (Allohypericia) perforata*, distribution of subspecies: 1 — subspecies *simillima*, specimens with rufous legs, 2 — subspecies *simillima*, specimens with dark metallic legs, 3 — subspecies *turczaninoffi*, 4 — specimens with intermediate characters between the respective subspecies, 5 — subspecies *perforata* s.str. (Orig.)

Table 1. Variability of *Ch. spectabilis*

CHARACTERS	KRAS. KRAI	TUVA	SAYAN.	MONG.	TRANSBAIK.	KHAB. KRAI	OKH. SEA	KAMTSCH.
HEAD	1		9	5			2	
violet								
blue			6	3	1	1		
bluish-green	1	3	2	1	1	1		
green		2	4	2	1	7	2	2
PRONOTUM	2		12	5				2
violet			6	2	2	1		
blue		2	2	2	1	1		
bluish-green		3		2		7	2	2
green								
UNDERSIDE			14	7	1			2
violet			3	1				
blue		4	3	3	2			2
bluish-green	2	1				9		
green								
SUTURAL STRIPE /		5	7	5	1	2		2
broader			11	4	1	7		
similar								
SCUTELLUM	2		1					2
narrower								
ELYTRAL LATERAL STRIPE		5	20	11	3	7		2
yes								
no	2					2		2
ELYTRAL DISKAL BLACK STRIPE		3	4		1	4		
yes								
no		2	15	11	2	5	4	2
PRONOTAL LATERAL IMPRESSION IN ANTER. ½	1	2	7	1		7		3
no								
yes	2	3	9	4	2	2	1	2

Legend: KRAS. KRAI – Krasnoyarsk Krai, SAYAN. – Sayans + Buryat, MONG. – Mongolia, TRANSBAIK. – Transbaikalia,

KHAB. KRAI – Khabarovsk Krai, OKH. SEA – Okhotsk Sea shore, KAMTSCH. – Kamtschatka.