

Revision of *Agrilus cuprescens* (Ménétriés, 1832) and related species (Coleoptera: Buprestidae)

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Abstract

The revision of *Agrilus cuprescens* (Ménétriés, 1832) and its relatives *A. salicis* Frivaldszky, 1877; *A. pecirkai* Obenberger, 1916; *A. paludicola* Krogerus, 1922 and *A. ribesi* Schaefer, 1946 is given. All species are illustrated. The following taxonomic changes are proposed: *A. paludicola* (**stat. nov.**) is considered as a species; *A. amethyopterus* Semenov-Tian-Shanskij, 1890 is considered as a subspecies of *A. cuprescens* (**stat. nov.**); *A. viridis* (Linné, 1758) (= *rudis* Abeille de Perrin, 1897 **syn. nov.**; = *caenus* Obenberger, 1924 **syn. nov.**); *A. cuprescens cuprescens* (Ménétriés) (= *lacrymans* Abeille de Perrin, 1895 **syn. nov.**; = *foveolatus* Abeille de Perrin, 1897 **syn. nov.**; = *calcicola* Obenberger, 1916 **syn. nov.**; = *altaicola* Obenberger, 1935 **syn. nov.**; = *kuznecovinus* Obenberger, 1936 **syn. nov.**). The names *chalconatus* Megerle and *indigacellus* Obenberger are unavailable. Lectotypes of 15 species are designated.

Key words: Taxonomy, synonymy, revision, Coleoptera, Buprestidae, Agrilinae, *Agrilus*, Palearctic Region

Introduction

Agrilus cuprescens (Ménétriés, 1832) belongs to the *A. viridis* (Linné, 1758) species group characterized mainly by the prominent, separately subarcuate elytral apices and the rounded apex of the last ventrite. *Agrilus cuprescens* and its relatives are each smaller species with a more robust body. The taxonomy of *A. cuprescens* has been confused due to its extensive Eurosiberian distribution and obvious morphological and chromatic variability. Numerous names were proposed at the species, subspecies or infrasubspecies rank, respectively. Subsequent to their description, these names have been freely combined in various ranks and in almost all possible combinations, sometimes even without regard to priority (e.g., Obenberger 1927).

Agrilus cuprescens was described from Transcaucasia and for a long time was ignored by European workers, who instead used the name *A. aurichalceus* Redtenbacher, 1849. Russian entomologists had not recognized the conspecificity of *A. cuprescens* and *A. aurichalceus*, because they misidentified *A. aurichalceus*. In fact, records of *A. aurichalceus* from the former USSR pertain to *A. salicis* Frivaldszky, 1877, as clearly shown by characters used in their keys (finely punctate vertex and small eyes with lower margin not reaching antennal socket) (e.g., Rikhter 1945: 166; Alexeev 1957: 152; Alexeev 1959: 15; Rikhter & Alexeev 1965: 300; Kostin 1973: 107; Alexeev 1975: 158). The first step to unravel this situation was made by Alexeev (1975) who suggested that specimens from Mongolia identified by Cobos (1972) as *A. aurichalceus* were in fact *A. cuprescens*. Nevertheless, Alexeev still supposed that it was merely a misidentification. The conspecificity of both species was finally proposed by Alexeev (1989) and recently accepted by European entomologists. Despite that, more taxa remain with either uncertain status or poorly defined association to *A. cuprescens*.

The main aim of this paper is to resolve the intricate taxonomy of *A. cuprescens*. All taxa associated with *A. cuprescens* (synonyms, subspecies or infrasubspecific taxa) have been examined and are discussed herein. Additionally, similar species (*A. salicis* Frivaldszky, 1877; *A. pecirkai* Obenberger, 1916; *A. paludicola* Krogerus, 1922 and *A. ribesi* Schaefer, 1946) are included in this revision.

Material and methods

The following abbreviations are used in the text: [p], preceding data 'printed'; [h], preceding data 'handwritten'. Abbreviations for museums and collections are: EJCB = Collection of E. Jendek, Slovak Academy of Sciences, Bratislava, Slovakia; IRSN = Institut Royal des Sciences Naturelles de Belgique, Bruxelles, Belgium; MHNL = Muséum d'Histoire Naturelle de Lyon, Lyon, France; MNHN = Muséum national d'Histoire naturelle, Paris, France; NMPC = Národní muzeum, Prague, Czech Republic; ZIN = Russian Academy of Sciences, Zoological Institute, St. Petersburg, Russia; ZMAN = Universiteit van Amsterdam, Instituut voor Taxonomische Zoologie, Zoologisch Museum, Amsterdam, Netherlands. Square brackets "[]" are used for my remarks and addenda; the backslash "\" is used to separate data from different labels.

The examined species-group names are divided into those that are considered either unavailable or available. The reason for considering any name as unavailable is discussed at each name. The available names are listed chronologically. Each record includes the name of the species, the author, the date and the page number for the original description, followed (in parentheses) by the original genus combination. The original rank for each name, e.g., subspecies, race, variety, form or aberration, is stated.

Subsequently fixed name-bearing types were provided with a printed red label bearing all relevant data: e.g., type status, species name in original combination and correct spell-

ing, author, year of the publication and an inscription “E. Jendek design.” along with year of designation.

The type locality is quoted in the language and form of the original citation, the order of these data is sometimes altered from the original sequence. Data were taken from all available sources, e.g., the original publication, the locality originally cited and the lectotypes’ label data. To preserve original locality data, complements and updates are consistently given in “[]”.

Localities have been updated according to the GEOnet Names Server of the National Imagery and Mapping Agency (NIMA) or Microsoft Encarta Interactive World Atlas 2001.

Unavailable names

chalconatus or *chalconotus* Megerle

This name was introduced by Dejean (1833: 83) as a variety of *A. hyperici* (Creutzer, 1799). Kiesenwetter (1857: 158) noticed, that *A. aurichalceus* is misidentified under the name *chalconotus*: “*A. aurichalceus* scheint in Oesterreich nicht gerade besonders selten. Er ist nebst *Agr. hyperici* von Ullrich unter dem Namen *A. chalconotus* versendet, werden”. From that time, the name *chalconatus* or *chalconotus* is frequently cited in the synonymy of *A. aurichalceus*. Megerle did not describe this name as new. **Unpublished name.**

indigacellus Obenberger, 1916: 270, 271, 272 (*Agrilus*; cited as an aberration of *viridis* on pages 270, 272 and a variety of *viridis* on p. 271).

Though the status of this taxon was cited variant, it was firstly introduced and diagnosed as a name of aberration and thus is an **unavailable name** (ICZN, Article 45.6.2). As an infrasubspecific name of *A. aurichalceus* was firstly proposed by Théry (1942: 166).

Available names

cuprescens Ménétériés, 1832: 154 (*Buprestis*).

Lectotype ♂, ZIN, by present designation: “Taliisch. [p] [red label] \ *cuprescens* Menet Talysch [h] \ *Agrilus cuprescens* Mén Type! [h]”. Number of syntypes unknown.

Type locality: [Azerbaijan] Périmbal, sur les montagnes de Talyche [Talish Mountains, 38°42'N, 48°18'E].

Remarks. Only the head, thorax and base of elytra of the lectotype remain preserved. The sex was determined according the distinctly pubescent prosternal process. The examination of the lectotype confirmed its conspecificity with *A. aurichalceus* as proposed by Alexeev (1989: 488).

Confirmed hosts are *Rubus* and *Rosa* species; records from other host plants are misidentification of similar species (Hellrigl 1978).

Material examined. LUXEMBOURG: 1 ex (EJCB): “Luxembourg, Ettelbruck [49°50'N, 6°07'E], 26. VI. 1977”; 2 ♂♂ (EJCB): “Luxembourg, Hallerbach [site unlocated] 29. VI. 1980”. GERMANY: 1 ex (EJCB): “Thuringia sept. [51°20'N, 10°40'E] Kyffhausergeb. Kosakenberg [site unlocated] 11. 8. 1963 Dohrn leg.”; 1 ex (ZMAN): “München [48°09'N, 11°32'E] 18. 7. 1918”; 1 ex (ZMAN): “Beieren Berchtesgaden [47°37'N, 13°00'E] VI. 1969”; 1 ex (ZMAN): “Karlsruhe [49°00'N, 8°23'E]”. CZECH REPUBLIC: 3 exs (EJCB): “ČSSR, Moravia mer. Břeclav [48°45'N, 16°53'E] 20. 7. 1979 Jendek leg.”; 1 ex (EJCB): “Bohemia, 17. VI. 1993 Praha – Baba [50°04'N, 14°25'E] Z. Kletečka leg.”. SLOVAKIA: 3 exs (EJCB): “Slovakia, Bratislava [48°09'N, 17°07'E] 6. 6. 1978 E. Jendek leg.”; 3 exs (EJCB): “Slovakia, Hlohovec [48°26'N, 17°48'E] 7. 1978 E. Jendek leg.”; 3 exs (EJCB): “Slovakia, Modra [48°19'N, 17°18'E] 10. 6. 1982 E. Jendek leg.”; 1 ex (EJCB): “Slovakia, Durďošík [48°44'N, 21°24'E] 25. 7. 1995 Dr. Majzlan lgt.”; 2 exs (EJCB): “Slovakia or, Malý Kamenec [48°20'N, 21°47'E] 4. 7. 1992, O. Majzlan lgt.”; 1 ex (EJCB): “Slovakia or, Kuzmice env. [48°34'N, 21°34'E] 2. VI. 2001, I. Smatana lgt.”. UKRAINE: 5 ♂♂, 1 ♀ (EJCB): “Ukraine, Kherson reg. [46°30'N, 34°00'E] Antonovka vill. [site unlocated] 2. VI. 1995 Mishustin, R. leg.”. AUSTRIA: 3 exs (ZMAN): “Austria, L. Miller”. ITALY: 1 ♂ (EJCB): “Italia, Cerchio [42°04'N, 13°35'E], J. M. Duchon”; 1 ex (ZMAN): “Toscana, Vallombrosa [43°43'N, 11°31'E] 6. 1924 Righetti”. CROATIA: 1 ex (EJCB): “Dalm., Stobre [43°30'N, 16°31'E] 14. 6. 1970 M. Dvořák lgt.”; 1 ex (EJCB): “Juhoslavia, 20. VI. 1982 Drovenik [= Drvenik, 43°09'N, 17°14'E] Rambousek leg.”; 1 ♂ (EJCB): “Dalmatia Umgeb. Labin [43°34'N, 16°14'E]”. BOSNIA AND HERZEGOVINA: 1 ex (ZMAN): “Radobolje, U. Mostar [43°20'N, 17°48'E], Reitter leg.”. SERBIA AND MONTENEGRO: 1 ex (EJCB): “YU, Serbia Banat, Požarevac, Brančevo [44°42'N, 21°32'E] 1-5. vi. 2002, M. Snížek leg.”. GREECE: 1 ♂ (EJCB): “Graecia, Peloponnes p. Megalopoli env. [37°24'N, 22°07'E], 10. 5. 2000 I. Rychlík leg.”; 1 ex (EJCB): “Greece, Crete-Iraklion, Kato Simi env. 750-1200 m, 35°02'N, 25°29'E, 8-12.V.2003 Jendek, E. leg. 8-12.V.2003”. BULGARIA: 6 exs (EJCB): “Rozhen [41°31'N, 23°25'E] 13. 6. 1987 J. Kodada leg.”; 4 exs (EJCB): “Sandanski [41°33'N, 23°17'E], 17. 6. 1987 J. Kodada leg.”; 4 exs (EJCB): “Lozenec [42°12'N, 27°48'E] 2. 7. 1987 P. Svoboda”; 2 exs (EJCB): “Stara Zagora [42°25'N, 25°38'E], 21. 6. 1987 P. Svoboda”; 1 ex (EJCB): “Slnčev Briag [42°41'N, 27°42'E] 1-13. 7. 1982 Dr. M. Rešl leg.”; 1 ex (EJCB): “Asenovgrad [42°00'N, 24°52'E], 8. VIII. 1985”; 1 ex (EJCB): “Arkutino [42°18'N, 27°43'E] 25. VI. 1982, Jendek leg.”; 1 ex (EJCB): “Sofia [42°42'N, 23°19'E] env. Kutina, 16. VII. 1989, O. Šauša leg.”; 1 ex (EJCB): “Kavacite [42°10'N, 27°50'E] 23-28. vi. 1982 Jendek leg.”. TURKEY: 1 ex (EJCB): “Turkey, vil. Içel, 1200 m, Bolkar Daglari Mts. Çamliyayla [37°09'N, 34°36'E] 9. 6. 1991 Bednařík & Kovařík leg.”; 1 ex (EJCB): “Anatolien, 35 km östlich von Bingöl [38°54'N, 40°51'E], 10-11. 6. 1973, 1500 m, leg. C. Holzschuh”; 1 ♂ (EJCB): “Anatolien, Prov. Ankara, Kizilcahamam [40°28'N, 32°38'E], 4. 6. 1975 leg.

Holzschuh & Ressler”; 1 ex (EJCB): “Turkey mer. Akseki [unlocated because of several homonyms] 14. 6. 1993 Farbiak leg.”; 13 exs (EJCB): “Turc., Sivas distr. Zara env. [39°53'N, 37°46'E] 9. VI. 2001, 1800 m, Kurbagalibeli Geç. Voříšek & Dostál”; 1 ex (EJCB): “Turc., Artvin distr., Parmak Dagi, 17. VI. 2001, 700 m, Parmak Dagi, Artvin [41°10'N, 41°49'E], Kafkazor, Voříšek & Dostál”. AZERBAIJAN: 1 ♂ (EJCB): “USSR, Azerb. SSR, 90 km N of Baku, Zarat env. [40°54'N, 49°15'E] 17. 6. 1984, E. Jendek leg.”; 1 ♂ (EJCB): “Nakhichevan [39°20'N, 45°30'E], Alagöz [site unlocated], 3. VI. 1955”. GEORGIA: 1 ex (EJCB): “Gruzia occ. Gagra [43°19'N, 40°15'E] 9. 6. 1966 Voříšek leg.”. KAZAKHSTAN: 1 ♂ (EJCB): “East Kazakhstan, 6-10. 7. 1993, 1000-1200 m, Syrianovsk env. [site unlocated] R. Andreeva leg.”; 1 ♀ (EJCB): “Kazakhstan 22. VII. 1965 Saur Mt. [47°05'N, 85°30'E], Karaungur riv.”; 2 ♀♀ (EJCB): “Kazakh. 7. 7. 1978 Karkaralinsk [= Quarqaraly, 49°24'N, 75°28'E] Vasilenko leg.”; 1 ♂ (ZIN): “Kazakh. Tarbagatai Mt. [49°11'N, 86°15'E], r. Kargalinka, 10 km ENE Kirovki [site unlocated], 12-13. VII. 1983 Volkovitsh leg.”; 1 ♂ (ZIN): “Kazakhstan, 21. VII. 1985 5 km Pokatilovka [45°22'N, 80°08'E], distr. Sopotka, Lopatin leg.”. RUSSIA: TUVA: 9 exs (EJCB): “Russia, Tuva, right bank of Biy-Khem riv. 800 m, Ujukskiy Mts. [51°45'N, 93°25'E] 22. V. - 6. VI. 1999, S. N. Vashchenko leg.”; 1 ex (EJCB): “Russia, Tuva, right bank of Biy-Khem riv. 800 m, Ujukskiy Mts. [51°45'N, 93°25'E] 2-5. VII. 1999, S. N. Vashchenko leg.”; 2 ♀♀ (ZIN): “Tuva, Kyzyl [51°42'N, 94°23'E], poima Eniseya, 13. 6. 1979, na Rosa, Korotyayev leg.”; 1 ♂ (ZIN): “Tuva, Kok-Gei, 10 km vyshe Kyzyla [51°49'N, 94°19'E], 20. 6. 1979, na Rosa, Korotyayev leg.”. AMUR REGION: 2 ♀♀ (ZIN): “Russia, Amurskaya obl. Shimanovsk reg. Saskal' [51°39'N, 126°53'E], 15. VI. 1975, Bereya riv., Kuznetsov leg.”; 1 ♀ (ZIN): “Russia, Amurskaya obl. Shimanovsk reg. Novogeorgievka [51°48'N, 127°06'E], 27. VI. 1976, Kuznetsov leg.”. KHABAROVSK: 2 ♀♀ (EJCB): “Sib. or. Chabarovsk 7. 6. 1977 Voronež [= ?Voronezhskoye, 48°38'N, 135°05'E] Víša leg.”. PRIMORYE: 5 exs (EJCB): “Russia: Primorskiy Region: Sichote-Alin Mts., Sokoltchi [= Sokol'chi, 43°18'N, 134°13'E], 1-15.VII. 1990, leg. Kadlec & Voříšek”; 1 ♀ (EJCB): “USSR - Sibiria or., Ussuri reg. Jasnoe [site unlocated] 450 m 11-14. 7. 1989, St. Jákl lgt.”; 1 ♀ (EJCB): “Russia: Ussuri reg. Novovarvarovka [site unlocated] 6-10.VII. 1989, R. Červenka leg.”.

Distribution. Europe: Northward to Sweden, Finland, Estonia, Latvia, Lithuania – Bílý 1982 (as *A. aurichalceus*); Krogerus 1925 (as *A. viridis* subspecies *chrysoderes* variety *calcicola*). Unrecorded from Iceland, Great Britain, Ireland, Faroe Islands. Distributed throughout Central and South Europe: e.g., France (Corse included), Switzerland, Belgium – Schaefer 1949 (as *A. aurichalceus*); Germany – Horion 1955 (as *A. aurichalceus*); Poland – Burakowski, Mroczkowski, Stefanska 1985 (as *A. aurichalceus*); Czech Republic; Slovakia – Bílý 1993 (as *A. aurichalceus*); Austria – Zabransky 1991 (as *A. aurichalceus*); Hungary – Muskovits & Hegyessy 2002; Ukraine (including Krym) – Zagaikevich 1962 (as *A. chrysoderes*); Portugal, Spain – Arnáiz Ruiz et al 2002; Italy (including Sicily and Sardinia) – Curletti 1994 (as *A. aurichalceus*); Romania – Ruicănescu 1993 (as *A. aurichalceus*); Bulgaria – Sakalian 2003; Albania – Mühle 1984 (as *A. aurichalceus*);

Greece (including Aegean, Ioanian islands and Crete) – Mühle, Brandl & Niehuis 2000 (as *A. cuprescens calcicola*). Russia: European Territory: Saint Petersburg, Novgorod, Vladimir, Kaliningrad, Ryazan', Tambov, Moscow, Saratov regions. East Siberia: Chita region; Republics of Buryatia, Yakutia and Tuva. Far East: Khabarovsk, Primorye, Amur Region – e.g., Alexeev 1989, Anisimova 1973 (as *A. chrysoderes*). Kazakhstan – Kostin 1973; Mongolia – Cobos 1972 (as *A. aurichalceus*); Northeastern China and North Korea – Alexeev 1989 (without particular records); Turkey (both European and Asian part) – Niehuis & Tezcan 1993 (as *A. aurichalceus*); Azerbaijan – type locality of *A. cuprescens*; Georgia (Jendek herein). Possibly in North Africa. Introduced to USA.

aurichalceus Redtenbacher, 1849: 286. (*Agrilus*)

Type locality: Austria [indicated by the title of the work “Fauna Austriaca”].

Remarks. I failed to locate the type of *A. aurichalceus*. Taxonomic considerations are judged from the type locality and in accordance with the generally accepted concept of this taxon.

This name was considered oldest for a long time (see Introduction). Alexeev (1989: 488) first cited *A. aurichalceus* as a synonym of *A. cuprescens*. The name *aurichalceus* Redtenbacher is junior subjective synonym of *A. cuprescens*.

salicis Frivaldszky, 1877: 319 (*Agrilus*; variety of *viridis*).

Type locality: Serbia, Vojvodina, Grebenac village [44°54'N, 21°11'E] at Karaš (= Krassó) river.

Remarks. Lectotype designation, synonymy, taxonomic and nomenclatural analysis were given by Jendek (2002). This species was misidentified from the former USSR under the name *A. aurichalceus* (e.g., by Rikhter 1945: 166; Alexeev 1957: 152; Alexeev 1959: 15; Rikhter & Alexeev 1965: 300; Kostin 1973: 107; Alexeev 1975: 158) as follows from the characters given in their keys.

The following species of *Salix* have been recorded as host plants: *Salix triandra*, *S. rossica*, *S. rosmarinifolia* (Rikhter & Alexeev 1965 as *A. aurichalceus*); *S. caprea*, *S. aurita*, *S. viminalis*, *S. incana*, *S. purpurea*, *S. amygdalina*, *S. americana* (Hellrigl 1978 as *A. acutangulus*); *S. cinerea* (Niehuis & Tezcan 1993). I have reared this species in Slovakia commonly from *S. repens*.

amethystopterus Semenov-Tian-Shanskij, 1890: 342 (*Agrilus*).

Type locality: [Russia, Dagestan] Caucasus or: Derbent [42°03'N, 48°17'E].

Remarks. I failed to locate the holotype (by monotypy) of *A. amethystopterus* in ZIN. I have examined specimens determined by Alexeev from ZIN and material cited below.

This taxon is currently considered as a distinct species. It differs from *A. cuprescens* by more produced elytral apices, bright blue color and a sparsely punctate or rugoso-punctate frons and vertex. Due to the limited material available, I prefer downgrade *A. amethys-*

topterus as a subspecies of *A. cuprescens* (**stat. nov.**), although it may also represent an ecological form of *A. viridis*.

Alexeev (1959) cited *Cornus* as the host plant.

Material examined. CAUCASUS: 2 ♀♀ (EJCB): “Cauc. occ. 30. 5. [19]73 Asha flum. [site unlocated] Voříšek leg.”. RUSSIA: 1 ♂ (EJCB): “W Caucasus, Adygeia [= Adygeya, 45°00'N, 40°00'E] NIKEL vill. 28. vi. 2000”. GEORGIA: 1 ♀ (EJCB): “Cauc. Adžar [= Ajaria] 6. [19]75 Batumi env. [41°38'N, 41°39'E] Ing. Gotwald lgt.”; 1 ♀ (EJCB): “Borzhomi [= Borjomi 41°51'N, 43°23'E] 06. 07. [19]80”.

Distribution. Russia: Krasnodarsk region (Alexeev 1959), Adygeya, Dagestan and Georgia.

chrysoderes Abeille de Perrin, 1891: 283-284 (*Agrilus*).

Lectotype ♂, MNHN, by present designation: “Bloudan [h] \ Type [p] [red ink] \ MUSÉUM PARIS Coll. ABEILLE de PERRIN 1919 [p] \ *A. chrysoderes* Ab. [h]” and two paralectotypes, one labeled “BLD [= Bloudan] [p]”, second “Liban [h]”. Described from three syntypes.

Type locality: [Syria] Bloudan (Anti-Liban) [= Blodan, 33°43'N, 36°07'E].

Remarks. Described from: “Bloudan (Anti-Liban)” and “Bethmeri (Liban)”. The type locality becomes the place of origin of the lectotype (ICZN, Article 76.2.).

It was originally described as a species and later alternatively cited as a synonym or as an infrasubspecific form or subspecies, of *A. aurichalceus*, *A. communis*, *A. cuprescens*, *A. rubicola* or *A. viridis*.

This taxon is characterized by a unique bright bicolored appearance. The head and pronotum are golden-cupreous; the elytra range from bright golden-green to dark-brown, always with a green tinge. I consider this taxon to be a Near Eastern subspecies of *A. cuprescens*. All records in the literature cited from other regions under the name *A. chrysoderes* pertain to the nominotypical subspecies of *A. cuprescens*.

Abeille de Perrin (1891) cited it from “en battant les chênes [= *Quercus*]”. This record is doubtful and needs reconfirmation.

Material examined. TURKEY: 1 ex (EJCB): “Turkey or. Tatwan [38°29'N, 42°17'E] 1800 m, 20-21.vi. 1997 leg. P. Kabátek”. SYRIA: 2 ♂♂ (EJCB): “Syria mer. occ. Anti Lebanon mts. Bludan [= Blodān, 33°43'N, 36°07'E]” and 1 ♂ (EJCB): same locality and collector, 3-5. VI. 1997, 1500 m; 1 ex (EJCB): “Syria mer. or. Kahta, Burgush [= Burqush, 33°27'N, 35°58'E], Jabal ash Shaykh, 7-9. VI. 1997 P. Kabátek leg.”; 1 ♂ (EJCB): “Syria bor. occ. 24-26. V. 1995, Slinfeh [= Slinfah, 35°35'N, 36°11'E], 1200 m, Jabal al-Asariyah Mts. P. Kabátek leg.” and 1 ♂ (EJCB): same locality and collector, 11.-12. VI. 1997, 1500 m. LEBANON: Bethmeri [site unlocated] [locality of paralectotype]”.

Distribution. Eastern Turkey, Syria, Lebanon.

proximus Rey, 1891: 19 (*Agrilus*; [preoccupied]).

Type locality: [FRANCE, Rhône-Alpes] Lyon.

Remarks. Described from a single specimen: “1 seul ex”. The holotype (by monotypy), preserved presumably in MHNL, was not examined.

Agrilus proximus Rey, 1891 is a junior primary homonym of *A. proximus* Saunders, 1871 and *A. proximus* Bauduer, 1878. Schaefer (1937: 85) studied the type: “dont j'ai vu le type” and he considered it a synonym of *A. chrysoderes rubicola*. *Agrilus rubicola* Abeille de Perrin, 1897 and *A. proximus* Rey are junior subjective synonyms of *A. cuprescens cuprescens*.

egenus Abeille de Perrin, 1895a: CXXII. (*Agrilus*; [preoccupied]).

Lectotype ♂, MNHN, by present designation: “Akbès [h] \ Type [p] [red ink] \ *A. chrysoderes* Ab. var. *lacrymans* Ab. [h] \ MUSÉUM PARIS Coll. ABEILLE de PERRIN 1919 [p]” and two paralectotypes with the same locality data. In IRSN, there is another unexamined specimen from the same place of origin which is considered a paralectotype. The number of syntypes is unknown.

Type locality: [Turkey, Hatay district] Haute-Syrie: Akbès [= Akbez Yeniyapan, 36°53'N, 36°28'E]. Former Syrian territory. Source Niehuis & Tezcan (1993: 4).

Remarks. *Agrilus egenus* Abeille de Perrin, 1895a is a junior primary homonym of *A. egenus* Gory, 1841. Abeille de Perrin, 1895b: cclxxiv proposed the replacement name *A. lacrymans*.

The examination of the type revealed that it is, as *A. calcicola*, *A. kuznecovi*, *A. kuznecovinus*, *A. lacrymans* and *A. mokrzeckii*, a dark form of *A. cuprescens cuprescens* occurring mostly in the Northeastern Mediterranean and the Russian Far East. Among the dark forms from the Balkans and those from the Russian Far East, no significant differences exist allowing the preservation of their discrete subspecific rank. After the examination of extensive material from all regions, I failed to find any distinctive character between the dark form and the nominotypical subspecies of *A. cuprescens*. The transformation in the color from the bright to the dark forms is gradational and can be described only by the increased trend in occurrence of dark specimens. See the Discussion below.

The name *egenus* Abeille de Perrin is a junior subjective synonym of *A. cuprescens cuprescens* and a junior objective homonym of *A. egenus* Gory, 1841.

lacrymans Abeille de Perrin, 1895b: CCLXXIV (*Agrilus*; replacement name for *A. egenus* Abeille de Perrin).

Remarks. Currently cited as a subspecies of *A. aurichalceus*.

The name *lacrymans* Abeille de Perrin is a junior subjective synonym of *A. cuprescens cuprescens*. (**syn. nov.**)

epistomalis Abeille de Perrin, 1897: 4, 13 (*Agrilus*).

Holotype by monotypy ♂, MNHN: “Moravia Besciden Reither [p] \ Type [p] [red ink] epistomalis Ab. [h] \ MUSÉUM PARIS Coll. ABEILLE de PERRIN 1919 [p]”. Described from single male.

Type locality: [Czech republic] Moravia, Besciden [= Beskidy Mts., 49°30'N, 18°30'E].

Remarks. Schaefer (1938: 85) studied the type: “J'ai examiné le type unique, provenant de Moravie, au Muséum de Paris. C'est la forme verte de l'Agr. rubicola Ab., dont ne diffère que par des détails individuels”. He considered it a synonym of *A. rubicola*, which is the junior subjective synonym of *A. cuprescens cuprescens*. My examination of the type confirms his opinion.

The name *epistomalis* Abeille de Perrin is a junior subjective synonym of *A. cuprescens cuprescens*.

rudis Abeille de Perrin, 1897: 4, 13-14 (*Agrilus*).

Lectotype ♀, MNHN, by present designation: “Türkei [h] \ Type [p] [red ink] \ MUSÉUM PARIS Coll. A. de PERRIN 1919 [p] \ rudis Ab. [h]”. Number of syntypes unknown. There is in MNHN also one ♂ labeled “Transbaicalica” and not “Transcaucasie” as stated by Abeille de Perrin. This specimen was cited in the description dubiously and is not considered a paralectotype.

Type locality: Türkei [= Turkey].

Remarks. Any type locality is cited in the description. The type locality is fixed from the lectotype label locality.

This taxon was described as a species, but was later considered as a subspecies of *A. viridis* by Obenberger (1916: 272), of *A. chrysoderes* by Obenberger (1926: 656), of *A. communis* by Obenberger (1927: 212, 221, 242) and of *A. aurichalceus* by Schaefer (1949: 403) and Cobos (1986: 255, 318). It was considered a variety of *A. rubicola* by Obenberger (1936: 1038). The examination of the lectotype confirmed its conspecificity with *A. viridis*.

The name *rudis* Abeille de Perrin is a junior subjective synonym of *A. viridis* (**syn. nov.**).

foveolatus Abeille de Perrin, 1897: 4, 15 (*Agrilus*; variety of *chrysoderes*).

Holotype by monotypy ♂, MNHN: “Sara-tow [p] \ Typ. Ballion [h] \ Agrilus foveolatus Ball. [h] \ Type [p] [red ink] MUSÉUM PARIS Coll. ABEILLE de PERRIN 1919 [p] \ *A. chrysoderes* var. foveolatus Ballion [h]”. Described from single male.

Type locality: [Russia, Saratovskaya Oblast'] Saratow [= Saratov, 51°34'N, 46°02'E].

Remarks. Although originally proposed as a variety of *A. chrysoderes*, this name cannot be considered unavailable because Schaefer (1949: 403) and Cobos (1986: 256, 318) used it as the subspecies of *A. aurichalceus* (ICZN, Article 45.6.4.1.).

The examination of the holotype by monotypy revealed its conspecificity with *A. cuprescens cuprescens*. The name *foveolatus* Abeille de Perrin is a junior subjective synonym of *A. cuprescens cuprescens* (**syn. nov.**).

rubicola Abeille de Perrin, 1897: 4, 15 (*Agrilus*; variety of *chrysoderes*).

Lectotype, sex not examined, MNHN, by present designation: “H. Alpes \ Type [p] [red ink] \ MUSÉUM PARIS Coll. ABEILLE de PERRIN 1919 [p] \ *A. chrysoderes* var. *rubicola* Ab. [h]”. Number of syntypes unknown.

Type locality: France [Provence-Alpes-Côte d'Azur]: Hautes-Alpes.

Remarks. Described from: “Turkestan”; “Syrie: Akbès”; “France: Hautes-Alpes”, “Ain” and “Landes”. The type locality becomes the place of origin of the lectotype (ICZN, Article 76.2.).

Although proposed as a variety of *A. chrysoderes*, this name cannot be considered unavailable because Obenberger (1936: 1032-1039) adopted it as the valid name of the species (ICZN, Article 45.6.4.1.). Théry (1942: 166) was the first who cited it as the synonym of *A. aurichalceus*. The examination of the lectotype confirmed its conspecificity with *A. cuprescens cuprescens*.

The name *rubicola* Abeille de Perrin is a junior subjective synonym of *A. cuprescens cuprescens*.

obtusus Abeille de Perrin, 1897: 5, 15 (*Agrilus*; variety of *chrysoderes*; [preoccupied]).

Lectotype, sex not examined, MNHN, by present designation: “N. D. de Lure \ Type [p] [red ink] \ MUSÉUM PARIS Coll. ABEILLE de PERRIN 1919 [p] \ *A. chrysoderes* var. *obtusus* Ab. [h]” and two paralectotypes from the same locality. Number of syntypes unknown.

Type locality: [France] N.-D. de Lure [site unlocated].

Remarks. This taxon was described from: “Caucase”, “Hongrie”, “Grèce” and “France: Lyon, N.-D.-de-Lure, Digne”. The type locality becomes the place of origin of the lectotype (ICZN, Article 76.2.).

Proposed as a variety of *A. chrysoderes*. The contents of the work does not unambiguously reveal that the name was proposed as an infrasubspecific entity, since the taxon was diagnosed also by morphological characters. Following ICZN, Article 45.6.4, such a name should be deemed subspecific from the original publication.

The name *obtusus* Abeille de Perrin, 1897 is a junior primary homonym of *obtusus* Horn, 1891. Schaefer (1949) proposed for it a new replacement name *obtusifera*. Presently cited as a synonym of *A. aurichalceus* (Curletti 1994: 177). The examination of the lectotype confirmed its conspecificity with *A. cuprescens cuprescens*.

The name *obtusus* Abeille de Perrin is a junior subjective synonym of *A. cuprescens cuprescens*.

calpicola Obenberger, 1916: 271, 272 (*Agrilus*; variety of *viridis*).

Lectotype ♂, NMPC, by present designation: “Hercegovina Mostar Dr. Grabowski [p] \ TYPUS [p] [red label] \ calpicola m. [male sign] [h] Det. Dr Obenberger [p]”. Number of syntypes unknown.

Type locality: [Bosnia and Herzegovina] Hercegovina, Mostar [43°20'N, 17°48'E].

Remarks. Described from: “Gr[eece]., Bos[nia]., Herz[egovina]”. The type locality becomes the place of origin of the lectotype (ICZN, Article 76.2.).

Though proposed as a variety of *A. viridis*, this name cannot be deemed unavailable because adopted as a subspecies of *A. viridis* (Obenberger 1917: 213) or as a valid species (e.g., Obenberger 1927: 234-235) (ICZN, Article 45.6.4.1.). Currently regarded as a subspecies of *A. cuprescens* (Mühle, Brandl & Niehuis 2000: 166).

The examined lectotype represents the dark form of *A. cuprescens cuprescens* occurring mostly in Northeastern Mediterranean and Russian Far East. See also remarks in Discussion and under name *egenus*.

The name *calpicola* Obenberger is a junior subjective synonym of *A. cuprescens cuprescens* (**syn. nov.**).

pecirkai Obenberger, 1916: 273-247 (*Agrilus*).

Holotype by monotypy ♀, NMPC: “Tchamkal Turkestan 198 / VII. 06 [h] \ Typus [p] [red label with black border] \ Agrilus Pečirkai m. Type [h] Det. Dr. Obenberger [p]”. Described from single female.

Type locality: Turkestan: Tschamkal [site unlocated].

Remarks. “Tschamkal” is cited in the description but on the holotype label is written “Tchamkal”. The historical area of Russian Turkestan comprised the republics of Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan.

A very distinct species recognized mainly by the small eyes, wide frons, frons and vertex with deep medial sulcus, very sharp, long and arcuate prehumeral and deep, narrow impression between prehumeral and lateral pronotal margin.

Material examined. TAJIKISTAN: 1 ♀ (EJCB): “USSR, Tardzjekistan 1981, Hissar Mts, 1300 - 1600 m, 50 km N of Dushanbe, 19. 6., Gushara [= Gushari, 38°55'N, 68°50'E], Varzob river, Vít Kubáň leg.”; 1 ♂ (EJCB): “Tadzik SSR, 25. 6. 1976 Hissar Mts. Ziddi [= Khazora, 39°03'N, 68°50'E]”; 1 ♂, 1 + (EJCB): “Tadjik, 17. V. 1982 Hissar, Romit [= Ramit, 38°44'N, 69°19'E] P. Štys leg.”. KYRGYZSTAN: 2 ♀♀ (ZIL): “Ferganskii khr., 15 km SV [= Northeastern] Arkhangel'skogo [Arkhangel'skoye] [41°12'N, 73°28'E], Kirgiz-iya 28-29. VI. 1986 [in Russian]”.

Distribution. Tajikistan and Kyrgyzstan.

paludicola Krogerus, 1922: 111-113 (*Agrilus*; subspecies of *viridis*).

Lectotype ♂, NMPC, by present designation: “Fennia [p] \ Hyvinkää [p] \ Krogerus [p] \ paludicola mihi [h] \ TYPUS [p] [red label]” and one paralectotype with the same locality data. Number of syntypes unknown.

Type locality: Fennia [Finland, Uusimaa], Hyvinkää [60°37'N, 24°52'E].

Remarks. Described from: “Finland: Kol. Petrosawodsk (Günther). Ik. Muolaa, Leipäsuu. N. Hyvinkää, Laitilansuo. Ta. Hattula, Leteensuu”. The type locality becomes the place of origin of the lectotype (ICZN, Article 76.2.).

Described as a subspecies of *A. viridis*. Obenberger (1926, 1936) considered it as a distinct species. Bílý (1982: 65, 70-71) as a Northern subspecies of *A. aurichalceus*.

This taxon is very similar to the dark forms of *A. cuprescens* but it differs by a larger body, more prominent elytral apices, mentonniere distinctly arcuately emarginate and anterior pronotal margin clearly bisinuate with prominent medial lobe. I consider *A. paludicola* (**stat. nov.**) to be a distinct species with close affinity to *A. viridis*.

Krogerus (1922, 1925) cited *Betula nana* as the host plant.

Material examined: FINLAND: 1 ♂ (EJCB): “Fennia Sa. [Kymi reg.] Luumäki [60°55'N, 27°40'E], 25. 7. 1928”; 1 ♀ (EJCB): “Fennia Kb. [Pohjois-Karjala reg.] Rääkkylä [62°18'N, 29°37'E], 20. 7. 1965, leg. O. Ronin”.

Distribution. Norway; Sweden; Finland; Estonia; Russia: Saint Petersburg region, Karelia, Murmansk region (Rikhter 1945; Bílý 1982).

communis Obenberger, 1924: 41 (*Agrilus*; variety of *viridis*).

Lectotype, sex not examined, NMPC, by present designation: “Závist, Bohemia centr. coll. Obenberger [h] \ Typus [p] [red label] \ var. communis m. Type [h] det. Dr. Obenberger [p] \ Mus. Nat. Pragae Inv. [p] 24837 [h] [orange label]” and five paralectotypes. Number of syntypes unknown.

Type locality: [Czech republic] Bohemia (Závist) [49°29'N, 12°41'E].

Remarks. Described from: “Bohemia (Závist); Saxonia (Dresden, Prov. Sachsen, Vogtland); Germ[ania] (Mittelfranken) Bavaria; Gallia (Cazaux); Croatia (Fužin); Graecia; Bulgaria (Sofia - Dr. Rambousek); Russia m.: Sarepta.”. The type locality becomes the place of origin of the lectotype (ICZN, Article 76.2.).

Obenberger (1924) cited *Rubus* as the host plant.

Proposed as a variety of *A. viridis*, but later adopted as a valid species (e.g., Obenberger 1927). Such a name can not be deemed unavailable (ICZN, Article 45.6.4.1.). Cited as a synonym of *A. chrysoderes* by Méquignon (1930: 208), of *A. rubicola* by Schaefer (1938: 85), of *A. aurichalceus* by Théry (1942: 166), of *A. cuprescens* by Rikhter & Alexeev (1965: 300).

The examination of the lectotype confirmed the conspecificity with *A. cuprescens cuprescens*.

caenus Obenberger, 1924: 40 (*Agrilus*; subspecies of *viridis*).

Lectotype ♂, NMPC, by present designation: “Sicilia [h] \ TYPUS [p] [red label] \ *A. viridis* ssp. caenus m. Type [h] Det. Dr. Obenberger [p] \ Mus. Nat. Pragae Inv. [p] 24357 [h] [orange label]”. Number of syntypes unknown.

Type locality: Sicilia [= Sicily].

Remarks. Proposed as a subspecies of *A. viridis*, later cited as a subspecies of *A. chrysoderes* by Obenberger (1926: 656), of *A. communis* by Obenberger (1927: 211, 220, 224, 241) or *A. aurichalceus* by Schaefer (1949: 403), Cobos (1986: 256) and Curletti (1987: 152, 1994: 178). Obenberger (1936: 1038) considered it a variety of *A. rubicola*, Théry (1942: 166) as an aberration of *A. aurichalceus*.

The lectotype has a remarkable narrow, white, pubescent, adsutural patch in the hind third of the elytra. This character occurs commonly in *A. viridis* and in limited extension also in *A. cuprescens*. The examined lectotype possesses large eyes, long and narrow antennae, narrow tarsi and feebly arcuately emarginate mentonniere. I consider it to be a small specimen of *A. viridis*, very similar to specimens reared from *Acer*.

The name *caenus* Obenberger is a junior subjective synonym of *A. viridis* (**syn. nov.**).

krasai Obenberger, 1924: 40 (*Agrilus*; variety of *viridis*).

Lectotype, sex not examined, NMPC, by present designation: “Bratislava [h] \ Typus [p] [red label] \ viridis var. krasai m. Typus [h] Det. Dr. Obenberger [p] \ Mus. Nat. Prague Inv. [p] 24828 [h] [orange label]”. Number of syntypes unknown.

Type locality: Slovensko [= Slovakia]: Bratislava [48°09'N, 17°07'E].

Remarks. Described from: “Slovensko: Bratislava. Bohemia: Závist”. The type locality becomes the place of origin of the lectotype (ICZN, Article 76.2.).

The name *krasai* was proposed as the variety of *A. viridis*. The contents of the work does not unambiguously reveal that the name was proposed as an infrasubspecific entity, since the taxon was diagnosed also by morphological characters. Following ICZN, Article 45.6.4, the name should be deemed subspecific from the original publication. It was cited by various authors as a variety or aberration of *A. chrysoderes*, *A. communis* or *A. aurichalceus*. As an infrasubspecific form of *A. aurichalceus* it was firstly proposed by Théry (1942: 166). Curletti (1994: 177) cited it as a synonym of *A. aurichalceus*.

The examined lectotype is conspecific with *A. cuprescens cuprescens* and the name *krasai* Obenberger is its junior subjective synonym.

mokrzeckii Obenberger, 1927: 204-209, 210, 211, 220, 241 (*Agrilus*; subspecies of *communis*).

Lectotype ♂, NMPC, by present designation: “Bulgaria Kasanlik [h] \ TYPUS [p] [red label] \ ssp. Mokrzeckii m. Typ [male sign] [h] Det. Dr. Obenberger [p] \ Mus. Nat. Prague Inv. [p] 24842 [h] [orange label]” and one paralectotype with the same locality data. Number of syntypes unknown.

Type locality: Bulgaria, Kasanlik [= Kazanlak, 42°37'N, 25°24'E].

Remarks. Proposed as a subspecies of *A. communis* with *Rosa* as the host plant. Alexeev (1959: 14) cited it as a synonym of *A. chrysoderes*, Rikhter & Alexeev (1965: 300) as a synonym of *A. cuprescens*. The lectotype is conspecific with the dark form of *A. cuprescens cuprescens*. See also remarks under *egenus*.

The name *mokrzeckii* Obenberger is a junior subjective synonym of *A. cuprescens cuprescens*.

altaicola Obenberger, 1935: 168-169 (*Agrilus*).

Lectotype ♂, NMPC, by present designation: “Altaj mont. [h] \ TYPUS [p] [red label] \ *Agrilus altaicola* m. Type [h] Det. Dr. Obenberger [p] \ Mus. Nat. Pragae Inv. [p] 24315 [h] [orange label]”. Number of syntypes unknown.

Type locality: Montes Altai.

Remarks. Altai Mountains is a mountain range in central Asia, mostly in Mongolia, China, Kazakhstan, and South Russian Federation.

The examination of the lectotype revealed the conspecificity with *A. cuprescens cuprescens*. The name *altaicola* Obenberger is a junior subjective synonym of *A. cuprescens cuprescens* (**syn. nov.**).

kuznecovi Obenberger, 1935: 169 (*Agrilus*; subspecies of *communis*; [preoccupied]).

Lectotype, sex not examined, NMPC, by present designation: “B. Sukhodol' Kangou-za Prim. obl. [p] [in Russian] 27. VII. [h] 911 [p] \ Rydzevskii i Vr. Kuznecov' [p] [in Russian] \ TYPUS [p] [red label] \ *Agrilus communis* ssp. *Kuzněcovi* m. Type [h] Det. Dr. Obenberger [p] \ ssp. *Kuzněcovicinus* n. n.! [h] Det. Dr. Obenberger [p] \ Mus. Nat. Pragae [p] 24830 [h] Inv. [p] [orange label]”. In ZIN are additional three type specimens from the Khanka lake which will be considered paralectotypes. Number of syntypes unknown.

Type locality: [Russia] Prim. obl. [= Primorskiy Kray] B. Sukhodol' [= Sukhodol, 43°10'N, 132°21'E], Kangou-za.

Remarks. Described from: “Ussuri mer.: Trojckoje-Chanka; Kamen Rybolov; Irkutskaja Gub.: Statio Padun (in fluvio Tunguska or.; Primorje: Kangou-za, V. Suchodol etc.”. The type locality becomes the place of origin of the lectotype (ICZN, Article 76.2.).

This taxon represents the dark form of *A. cuprescens cuprescens*. See remarks in Discussion and under *A. egenus*.

The name *kuznecovi* Obenberger is a junior subjective synonym of *A. cuprescens cuprescens* (**syn. nov.**).

kuznecovicinus Obenberger, 1936: 1038 (*Agrilus*; replacement name for *kuznecovi* Obenberger, 1935 not Obenberger, 1933).

Remarks. The name *kuznecovicinus* Obenberger is a junior subjective synonym of *A. cuprescens cuprescens*. (**syn. nov.**)

obtusifera Schaefer, 1949 (*Agrilus*; replacement name for *obtusus* Abeille de Perrin)

Remarks. The name *obtusifera* Schaefer is a junior subjective synonym of *A. cuprescens cuprescens*. (**syn. nov.**)

ribesi Schaefer, 1946: 107-108 (*Agrilus*; variety of *viridis*).

Lectotype, sex not examined, MNHN in collection of Schaefer, by present designation: "Thénissey, 15. 6. [19]38". Number of syntypes unknown.

Type locality: [France, Bourgogne] Thénissey [47°29'N, 4°37'E].

Remarks. Described from: "Thénissey et Volnay (Cote-d'Or)". The type locality becomes the place of origin of the lectotype (ICZN, Article 76.2.).

The original spelling of this name is *ribesi* and not *ribesii* as often cited by various authors.

Described as a variety of *A. viridis*, but later adopted as a valid name of species (Schaefer 1968: 77-79). Such a name can not be deemed unavailable (ICZN, Article 45.6.4.1.).

This taxon is distinctive mainly by the form of pronotum, that is widest near anterior angles, with sides incurved before base, with acute hind angles, and the disk with clear medial impression, obvious mainly in basal part. I am inclined to the opinion that *A. ribesi* is an ecological form of *A. viridis*.

Discussion

Some of the features observed in local populations and used as diagnostic characters became useless when applied to material coming from the whole distributional area. Small specimens of *A. viridis* can be easily misidentified as *A. cuprescens*.

Here is an outline of variability of the selected characters of *A. cuprescens*: Body size 4.8–7.2 mm; body form varies from stout to slender regardless origin of specimens. Color ranges from bright to dark (Figs. 1–6) e.g.: silky-green, olivaceous-green (Europe); cyaneous, violet (Europe, Turkey); bright blue (Caucasus – ssp. *amethystopterus*); cupreous (Ukraine, Kazakhstan); brown-green (Europe, Turkey, Transcaucasia, Siberia); dark brown (S Europe, Turkey, Siberia, Far East); blackish with blue tinge (Bulgaria); blackish with green tinge (Tuva); silky-black (Balkan, Far East); brightly bicolor with head and pronotum golden-cupreous, elytra from bright golden-green to dark-brown, with green tinge (Eastern Turkey, Syria, Lebanon – ssp. *chrysoderes*). Dorsal side without distinct pubescence, sometimes with very narrow, whitish, adsutural strip in hind third of elytra. Fronto-vertex with or without medial sulcus, coarsely or finely (ssp. *amethystopterus*) rugoso-punctate. Pronotum widest in middle, rarely at anterior third, sides regularly arcuate, sometimes feebly incurved before basal angles; disk with deep or shallow lateral and medial pronotal impressions; prehumeral abated and obtuse, rarely obsolete. Elytral apices widely and deeply separately arcuate or almost subtruncate. Mentonniere wide, arcuate or subtruncate, without corners.

The variability of *A. cuprescens* affects morphology and color pattern (Figs. 1–6). Variations have random occurrence, sometimes with clinally increasing frequency in some areas. These characters have poor diagnostic value and cannot be used as distinctive char-

acters for definition of geographical subspecies. For example, the Balkan specimens of *A. cuprescens* can be easily distinguished by the dark blackish color from those from Central Europe. However, after revising specimens from the entire range it is impossible to clearly distinguish the Balkan populations, because of intermediate forms occurring in South Europe, Turkey, Transcaucasia, Siberia and in Far East. In general, the doubt about the validity of subspecies increased with the knowledge of specimens coming from the entire area. Nevertheless I have decided to preserve two subspecies of *A. cuprescens*: the subspecies *amethystopterus* due to the limited material and lack of credible data on bionomy, and the subspecies *chrysoderes*, which is very distinctive by its bright bicolored appearance.

Taxonomic overview

Taxa cited in the past in association with *A. cuprescens*, but found to be conspecific with *A. viridis* are also listed herein.

Agrilus viridis (Linné, 1758)

rudis Abeille de Perrin, 1897 **syn. nov.**

caenus Obenberger, 1924 **syn. nov.**

Agrilus cuprescens cuprescens (Ménétriés, 1832) Figs. 1–6

Available synonyms

aurichalceus Redtenbacher, 1849

proximus Rey, 1891

egenus Abeille de Perrin, 1895a

lacrymans Abeille de Perrin, 1895b **syn. nov.**

epistomalis Abeille de Perrin, 1897

foveolatus Abeille de Perrin, 1897 **syn. nov.**

rubicola Abeille de Perrin, 1897

obtusus Abeille de Perrin, 1897

calcicola Obenberger, 1916 **syn. nov.**

communis Obenberger, 1924

krasai Obenberger, 1924

mokrzeckii Obenberger, 1927

altaicola Obenberger, 1935 **syn. nov.**

kuznecovi Obenberger, 1935

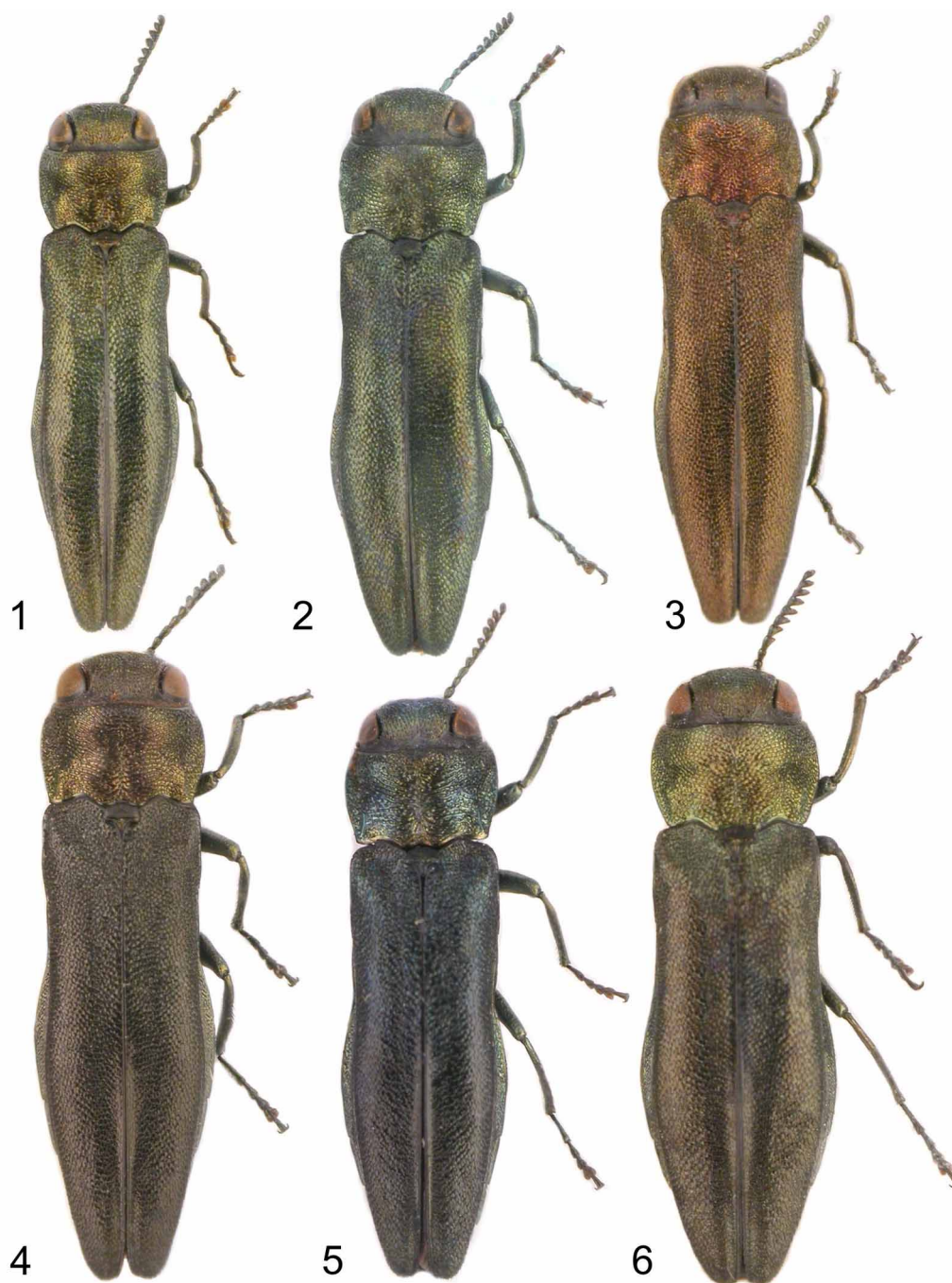
kuznecovinus Obenberger, 1936 **syn. nov.**

obtusifera Schaefer, 1949

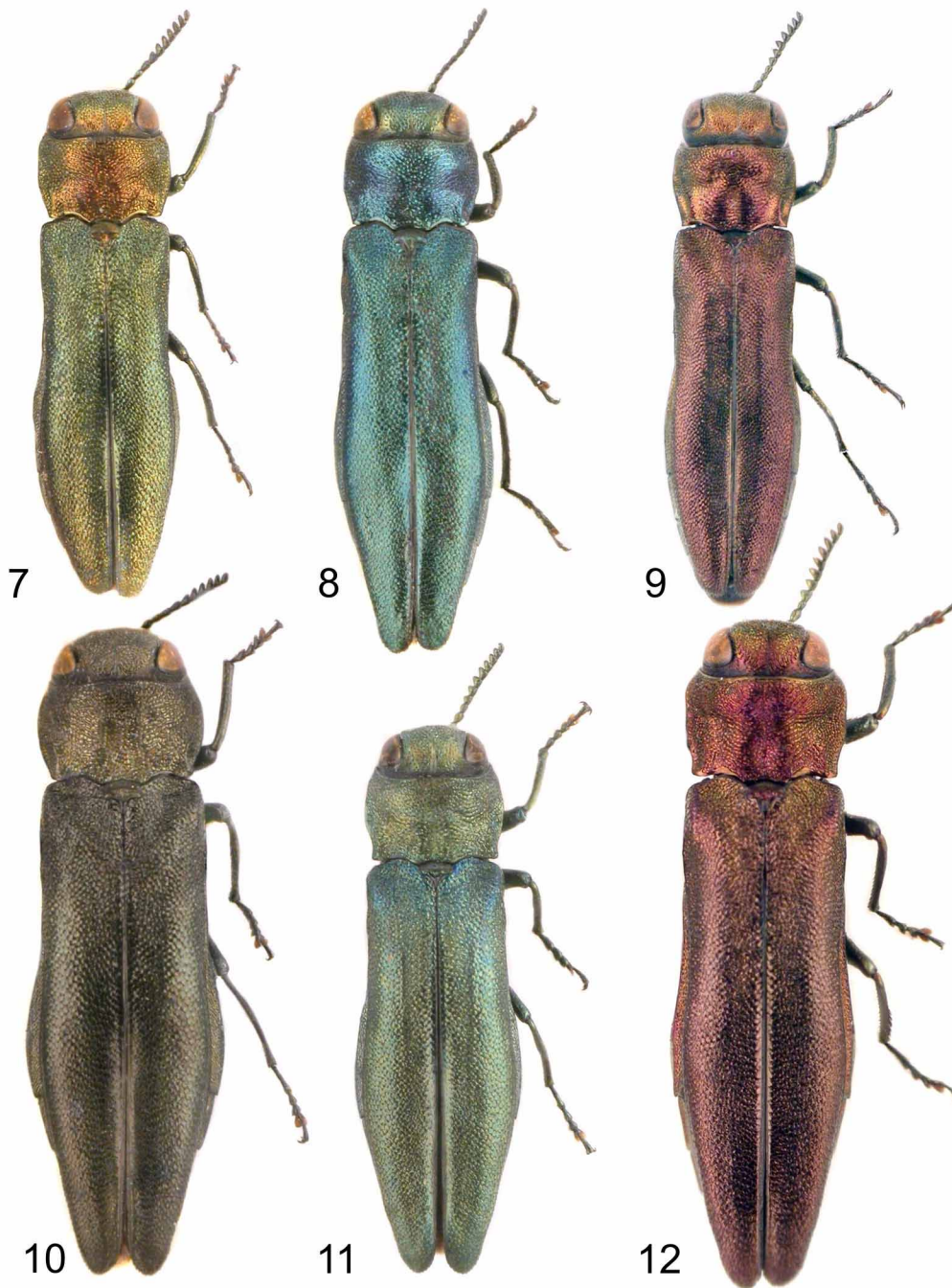
Unavailable synonyms

chalconatus Megerle

indigacellus Obenberger, 1916



FIGURES 1–6. Variability of *Agrilus cuprescens cuprescens* (Ménétriés) from various regions: 1) Slovakia, 5.6 mm; 2) Russia – Tuva, 6.0 mm; 3) Ukraine, 5.9 mm; 4) Bulgaria – Rozhen, 6.6 mm; 5) Bulgaria – Lozenec, 6.1 mm; 6) Russia – Primorye, 6.4 mm.



Figures 7–12. Habitus of: 7) *Agrilus cuprescens chrysoderes* Abeille de Perrin, 5.4 mm; 8) *A. cuprescens amethystopterus* Semenov-Tian-Shanskij, 6.0 mm; 9) *A. pecirkai* Obenberger, 5.3 mm; 10) *A. paludicola* Krogerus, 6.9 mm; 11) *A. salicis* Frivaldszky, 5.9 mm; 12) *A. ribesi* Schaefer, 7.1 mm.

- Agrilus cuprescens amethystopterus* Semenov-Tian-Shanskij, 1890 (**stat. nov.**) Fig. 8
Agrilus cuprescens chrysoderes Abeille de Perrin, 1891 Fig. 7
Agrilus salicis Frivaldszky, 1877 Fig. 11
Agrilus pecirkai Obenberger, 1916 Fig. 9
Agrilus paludicola Krogerus, 1922 (**stat. nov.**) Fig. 10
Agrilus ribesi Schaefer, 1946 Fig. 12

Acknowledgements

I would like to thank curators of the collection for providing material in their care. My sincere thanks are due to C. L. Bellamy (Sacramento, California, USA) and I. Löbl (Genève, Switzerland) for critical review and linguistic revision of the manuscript.

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