

## Taxonomic notes on some Palaearctic species of *Sphenoptera* from subgenera *Deudora* and *Sphenoptera* s. str. (part.) (Coleoptera: Buprestidae)

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*S. (D.) smyrneensis* Gory, 1841 is resurrected from synonymy with *S. (D.) rauca* (Fabricius, 1787). New synonymy is established for the following taxa: *S. (D.) smyrneensis* Gory, 1841 (= *inconspicua* Jakovlev, 1893, *congrua* Jakovlev, 1900, *anxia* Jakovlev, 1900, *captiosa* Jakovlev, 1902, *delicata* Kerremans, 1909, *subsulcata* Kerremans, 1909, *migriensis* Obenberger, 1916, *nephele* Obenberger, 1929, *cassia* Obenberger, 1929, *maronita* Obenberger, 1929, *salomonis* Obenberger, 1952, *pseudorauca* Obenberger, 1952, *agilis* Obenberger, 1952, **synn. n.**), *S. (D.) rauca* (Fabricius, 1787) (= *heliobia* Obenberger, 1929, **syn. n.**), *S. (D.) gemmata* (Olivier, 1790) (= *raucoides* Obenberger, 1920, **syn. n.**), *S. (D.) signata* Jakovlev, 1887 (= *obsoleta* Jakovlev, 1891, *satelles* Jakovlev, 1898, *addenda* Jakovlev, 1900, *fejuna* Jakovlev, 1900, *detrita* Jakovlev, 1902, *destituta* Obenberger, 1929, *julia* Obenberger, 1929, *araxicola* Obenberger, 1929, *buresi* Obenberger, 1933, *hierosolymitana* Obenberger, 1946, *jureceki* Obenberger, 1946, *arsinoe* Obenberger, 1952, *gyaurdagensis* Obenberger, 1955, **synn. n.**), *S. (D.) aeneomicans* Kraatz, 1882 (= *unidentata* Jakovlev, 1891, *veselyi* Obenberger, 1915, *aladaghensis* Obenberger, 1920, *aeneofulgens* Obenberger, 1929, *persica* Obenberger, 1929, *ushinskii* Obenberger, 1929, *ahriman* Obenberger, 1929, *amasiae* Obenberger, 1929, *baicalensis* Obenberger, 1929, *fabichi* Obenberger, 1952, *fleischeri* Obenberger, 1952, *moganensis* Obenberger, 1955, *hoberlandti* Obenberger, 1955, **synn. n.**), *S. (D.) misella* Jakovlev, 1900 (= *liliputana* Obenberger, 1929, *callimicra* Obenberger, 1929, **synn. n.**), *S. (D.) incerta* Jakovlev, 1887 (= *dolens* Jakovlev, 1893, *confusa* Kerremans, 1913, *joukli* Obenberger, 1929, **synn. n.**), *S. (D.) koenigi* Jakovlev, 1891 (= *integripennis* Obenberger, 1929, *alma* Obenberger, 1952, **synn. n.**), *S. (D.) sulciventris* Jakovlev, 1886 (= *kraatzii* Jakovlev, 1887, *alaiensis* Jakovlev, 1893, *dives* Jakovlev, 1902, *oucta* Jakovlev, 1902, *jaxartis* Obenberger, 1929, *kuliabensis* Obenberger, 1952, **synn. n.**), *S. (D.) bucharica* Jakovlev, 1900 (= *bactriana* Jakovlev, 1902, **syn. n.**), *S. (D.) hamata* Jakovlev, 1899 (= *zarawshanensis* Obenberger, 1929, **syn. n.**), *S. (D.) sculpticollis* Heyden, 1886 (= *alutaceiceps* Obenberger, 1929, *morgani* Obenberger, 1929, **synn. n.**), *S. (D.) simplex* Jakovlev, 1893 (= *fraterna* Jakovlev, 1900, *allecta* Jakovlev, 1900, *samotica* Obenberger, 1929, *ankarana* Obenberger, 1952, **synn. n.**), *S. (D.) micans* Jakovlev, 1886 (= *binominata* Kerremans, 1913, *irritatrix* Obenberger, 1929, *shah* Obenberger, 1929, *pseudomicans* Obenberger, 1929, *escalerae* Obenberger, 1929, **synn. n.**), *S. (D.) parysatis* Obenberger, 1929 (= *isfahanensis* Obenberger, 1952, *proserpina* Obenberger, 1952, **synn. n.**), *S. (D.) manifesta* Jakovlev, 1900 (= *megarauca* Obenberger, 1952, **syn. n.**), *S. (D.) curta* Jakovlev, 1885 (= *caspica* Jakovlev, 1904, *piavilscikovi* Obenberger, 1952, **synn. n.**), *S. (D.) antilibanensis* Obenberger, 1952 (= *nikitiae* Obenberger, 1952, **syn. n.**), *S. (s. str.) arcana* Jakovlev, 1908 (= *assuricola* Obenberger, 1920, *baghdadensis* Obenberger, 1929, *stella* Obenberger, 1952, *teheranica* Obenberger, 1952, *assuricola heliochaera* Obenberger, 1929, **synn. n.**), *S. (s. str.) antiqua* (Illiger, 1803) (= *serena* Jakovlev, 1900, *euro* Obenberger, 1929, **synn. n.**), *S. (s. str.) hypocrita* Mannerheim, 1837 (= *glabricollis* Obenberger, 1929, *levantina* Obenberger, 1929, **synn. n.**), *S. (s. str.) varia* Jakovlev, 1887 (= *samarkanda* Obenberger, 1929, **syn. n.**), *S. (s. str.) demissa* Marseul, 1865 (= *breiti* Obenberger, 1920, **syn. n.**), *S. (s. str.) pilipes* Jakovlev, 1886 (= *anchorifera* Obenberger, 1952, **syn. n.**). *S. donata* Obenberger, 1929 and *S. subtricotata* Kraatz, 1882 are transferred from subgen. *Deudora* to *Sphenoptera* s. str. and *S. confusa* Kerremans, 1913, from subgen. *Sphenoptera* s. str. to *Deudora*. Lectotypes are designated for 112 nominal species and subspecies and 5 infrasubspecific taxa. Neotype is designated for *S. armenu* (Steven, 1829). Taxonomic, nomenclatural, and distributional notes including new records for some species are given.

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## Introduction

This part of our study on Palaearctic *Sphenoptera* covers the extensive subgenus *Deudora* Jakovlev, 1898. A number of species and infra-subspecific forms attributed originally or subsequently to this subgenus are transferred here to subgenus *Sphenoptera* as valid taxa or junior synonyms.

The following abbreviations are used in the text: DEI – Deutsches Entomologisches Institut (Eberswalde, Germany); MNB – Museum für Naturkunde, Zentralinstitut der Humboldt-Universität zu Berlin, Institut für Systematische Zoologie (Berlin, Germany); MNHN – Museum National d'Histoire Naturelle (Paris, France); NMPC – Národní Muzeum v Praze (Prague, Czech Republic); NMW – Naturhistorisches Museum (Wien, Austria); TICB (TAMMIN, Insecta collection) – Vít Kubáň (Moravian Museum, Brno, Czech Republic) and Vojtěch Kubáň; TMB – Természettudományi Múzeum Budapest (Budapest, Hungary); ZIN – Zoological Institute, Russian Academy of Sciences (St. Petersburg, Russia); ZMH – Zoological Museum, Helsinki University (Helsinki, Finland).

For all the specimens examined, we cite their labels, except for those mentioned below, using the following abbreviations: (h) – handwritten text, (p) – printed text, (rus) – in Russian, (red) – on red paper. Type specimens of taxa described by B.E. Jakovlev are usually supplied with his original labels: one bearing a handwritten scientific name with printed line “B. Jakowlew det.” at the bottom, and another, “k. B. Jakovleva” [collection of B. Jakovlev] (p, rus); as a rule, a single type specimen or the first specimen of type series has an additional label “Typus” printed in red on white paper. Type specimens of taxa described by J. Obenberger also have standard labels with handwritten name and printed line “Dr. Obenberger det.” at the bottom, and “Type” printed in black on red paper. These labels as well as our labels with type designation (holotype, paratype, lectotype, and paralectotype) are not mentioned in the text, except some special cases. In citations of the label data we retained the original, though frequently erroneous, spelling.

## *Sphenoptera* (*Deudora*) *smyrneensis* Gory, 1841, stat. rest.

*smyrneensis* Gory, 1841: 305; Marseul, 1865: 370; Saunders, 1871: 88 (as sp.); Kerremans, 1892: 194; Jakovlev, 1898a: 21, 1902: 329; Kerremans, 1913: 219; Théry, 1928: 179; Obenberger, 1930a: 245 (as *rauca* F., syn.); Schaefer, 1949: 107 (as *gemmata* Ol., var.; *smyrneensis*); Cobos, 1986: 199 (as *gemmata* Ol., ?ssp.; *smyrneensis*).

*smyrneensis*: auct. (incorrect spelling).  
*inconspicua* Jakovlev, 1893: 134, **syn. n.**  
*congrua* Jakovlev, 1900: 405 (key), 419 (descr.), **syn. n.**  
*anxia* Jakovlev, 1900: 405 (key), 420 (descr.), **syn. n.**  
*captiosa* Jakovlev, 1902: 568 (key), 571 (descr.), 579 (cat.), **syn. n.**  
*delicata* Kerremans, 1909: 279, **syn. n.**  
*subsulcata* Kerremans, 1909: 282, **syn. n.**  
*migiensis* Obenberger, 1916: 249 (*Sphenoptera* s. str.); 1929a: 38 (*Deudora*), **syn. n.**  
*nephele* Obenberger, 1929a: 43 (key), 1930b: 241 (descr.), **syn. n.**  
*cassia* Obenberger, 1929a: 45 (key), 1930b: 243 (descr.), **syn. n.**  
*maronita* Obenberger, 1929a: 51 (key), 1930b: 250 (descr.), **syn. n.**  
*jurecki* Obenberger, 1946: 26 (part.).  
*salomonis* Obenberger, 1952: 12, **syn. n.**  
*pseudorauca* Obenberger, 1952: 13, **syn. n.**  
*agilis* Obenberger, 1952: 19, **syn. n.**

*Type material examined.* *S. smyrneensis* Gory, lectotype (designated here, MNHP): ♀, [bottom label] Smyrnenis Gory, Type, Orient, Smyrna [Turkey, Izmir] (h)/smyrnenis ♀ (h, blue); 1 paralectotype, ♀, same bottom label, without other labels.

– *S. inconspicua* Jak., lectotype (designated here, ZIN): ♂, Syrien, Kaifa [Israel, Haifa], Reitter (p)/ Type (h)/ inconspicua (h).

– *S. congrua* Jak., lectotype (designated here, ZIN): ♀, Caucasus, Araxesthal [Arax valley], Leder, Reitter (p)/ Type (p)/ congrua m. (h).

– *S. anxia* Jak., lectotype (designated here, ZIN): ♂, Mardin [Turkey] (h)/ Reitter (p)/ anxia m. (h)/ Type (p). Paralectotypes: 1 ♀, Mardin [Turkey] (h)/ Reitter (p)/ anxia m. (h); 1 ♀, Akbes [Turkey] (h)/ Reitter (p)/ anxia n. sp. (h).

– *S. captiosa* Jak., lectotype (designated here, ZIN): ♀, Caucasus, Araxesthal [Arax valley], Leder, Reitter (p)/ Type (p).

– *S. delicata* Kerr., holotype (MNHN): ♀, Eski Chehir [Turkey], v. Bodemeyer (p).

– *S. subsulcata* Kerr., lectotype (designated here, MNHN): ♂, v. Bodemeyer, Persien, Luristan [Iran] (p)/ subsulcata Kerr., Type (h)/ Museum Paris, Coll. Ch. Kerremans, 1923 (p).

– *S. migriensis* Obenb., lectotype (designated here, NMPC): ♂, Araxes [Arax valley], 6.10, Dr. Vesely (p)/ Inv. 26172/ obsoleta Jak. (h), Alexeev det. (p), cum typo comp. (h), Alexeev det. (p).

– *S. nephele* Obenb., lectotype (designated here, NMPC): ♀, Chusistan [Iran] (h).

– *S. cassia* Obenb., lectotype (designated here, NMPC): ♂, Chusistan [Iran] (h); 1 paralectotype, ♂, the same data.

– *S. maronita* Obenb., lectotype (designated here, NMPC): ♂, Syria (h).

– *S. jurecki* Obenb., 1 paralectotype (NMPC): ♀, Jericho, Palaestina [Israel], Houska leg. (p).

– *S. salomonis* Obenb., lectotype (designated here, NMPC): ♂, Libanon (h)/ *Sphenoptera* (*Deudora*) *captiosa* Jak., det. M. Niehuis, 1998 (p)/ (Syn.: *subsulcata* Kerr., *maronita* Ob., *agilis* Ob., *salomonis* Ob.), det. M. Niehuis, 1998 (p).

– *S. pseudorauca* Obenb., lectotype (designated here, NMPC): ♀, Marasch, Taurus, A. M. [Turkey] (h).

– *S. agilis* Obenb., lectotype (designated here, NMPC): ♂, Djezin, Libanon (p)/ *Sphenoptera* (*Deudora*) *captiosa* Jak., det. M. Niehuis, 1998 (p)/ (Syn.: *subsulcata* Kerr., *maronita* Ob., *agilis* Ob., *salomonis* Ob.), det. M. Niehuis, 1998 (p); 1 paralectotype, ♀, the same data.

**Remarks.** *S. smyrneensis* Gory was mistakenly synonymised with *S. rauca* F. by Kerremans (1892), that was accepted by subsequent authors. The examination of Gory's types has shown that it is a distinct species quite different from *S. rauca*. On the other hand, this species, being rather variable in the body shape, size and surface sculpture, was repeatedly described under different names from numerous localities by Jakovlev, Kerremans and Obenberger. The comparison of type specimens of *S. smyrneensis* with those of above indicated species, as well as the examination of large series from different localities has shown that all the specimens are conspecific.

**Note.** It is not clear from the description of *S. delicata* Kerr. whether it was based on one or several specimens, but Kerremans (1913: 109) mentioned only one "Type" specimen which should be considered as holotype.

**Distribution.** Israel, Lebanon, Syria, Turkey, Azerbaijan, Armenia, Iran.

### *Sphenoptera (Deudora) rauca* (Fabricius, 1787)

*rauca* Fabricius, 1787: 177 (*Buprestis*); Marseul, 1865: 366; Saunders, 1871: 87; Kerremans, 1892: 194; Jakovlev, 1898a: 329, 1902: 581; Kerremans, 1913: 218; Théry, 1928: 179; Obenberger, 1930a: 245; Cobos, 1986: 200.

*metallica* Fabricius, 1792: 210 (*Buprestis*); Gory & Laporte, 1839: 19; Marseul, 1865: 377 (as sp.) (Syn.: Saunders, 1871).

*geminata* Illiger, 1803: 244 (*Buprestis*); Mannerheim, 1837: 96; Gory & Laporte, 1839: 19 (as syn. of *lineata* F.); Marseul, 1865: 369 (as sp.) (Syn.: Saunders, 1871).

*striola* Illiger, 1805: 94 (*Buprestis*); Saunders, 1871: 88; Kerremans, 1892: 190 (as syn. of *lineola* Herbst) (Syn.: Kerremans, 1913).

*bassii* Gory & Laporte, 1839: 13; Marseul, 1865: 366 (under *rauca* F.) (Syn.: Saunders, 1871).

*similis* Gory & Laporte, 1839: 14; Marseul, 1865: 366 (under *rauca* F.) (Syn.: Saunders, 1871).

*bravaisii* Gory & Laporte, 1839: 30 (Syn.: Saunders, 1871).

*carduorum* Chevrolat, 1840: 14 (Syn.: Marseul, 1865).

*celtiberica* Gory, 1841: 302 (Syn.: Marseul, 1865).

*bravasi*: Marseul, 1865: 366 (under *rauca* F., incorrect spelling of *bravaisii*).

*heliobia* Obenberger, 1929a: 55 (key), 1930b: 254 (descr.), syn. n.

**Type material examined.** *S. bassii* Gory & Lap., lectotype (designated here, MNHN): ♀, Bassii Typ. Gory (h)/ Bassii ♀ (h, blue)/ ex Musaeo Mniszech (p).

– *S. carduorum* Chevrolat, ?syntype (MNHN): ♀, *carduorum* Chevrolat (h)/ *carduorum* ♀ (h, blue)/ ex Musaeo Mniszech (p)/ var. *Celtiberica* Gory Type, Portugal (h).

– *S. celtiberica* Gory, lectotype (designated here, MNHN): ♀, *celtiberica* (h)/ *celtiberica* ♀ (h, blue)/ ex Musaeo Mniszech (p).

– *S. heliobia* Obenb., lectotype (designated here, NMPC): ♀, Erekli, A. [sia] m. [inor] [Turkey] (h).

**Remarks.** Marseul (1865) listed and briefly re-described all species from Gory & Laporte (1839) under *S. rauca* as forms of uncertain taxonomic

rank. Saunders (1871) listed all of them as junior synonyms of *S. rauca*. Obenberger treated *S. celtiberica* at first as "*S. rauca* var." (1929a, 1930b) and later as subspecies (Obenberger, 1930a). Actually, this circummediterranean species does not comprise any reliably distinguished geographical races. Some minor differences mainly in the surface sculpture, pubescence and body shape which can be observed in different specimens (including the type specimen of *S. heliobia* Obenb.) are nothing more than individual varieties.

**Distribution.** The species is distributed around Mediterranean, from Portugal and Spain to Balkan Peninsula and Romania in the north and from Morocco to Syria and Turkey in the south. Reports from Iran, Iraq and Transcaucasia (Obenberger, 1930a, with question mark) need further confirmation.

### *Sphenoptera (Deudora) sobrina* Jakovlev, 1886

*sobrina* Jakovlev, 1886: 97.

**Type material examined.** *S. sobrina* Jak., lectotype (designated here, NMW): (sex unknown), Mann 1860, Arastia [Turkey] (p)/ *sobrina* Jak., type (h)/ Type (p, red); 1 paralectotype (NMW): (sex unknown), Kts. A. 24 [illegible] (h)/ *sobrina* Jak., type (h)/ Type (p, red).

### *Sphenoptera (Deudora) gemmata* (Olivier, 1790)

*gemma* Olivier, 1790: 90 (*Buprestis*); Saunders, 1871: 137 (as *Buprestis*; gen. uncertain); Kerremans, 1892: 194; Jakovlev, 1898a: 329; 1902: 581; Kerremans, 1913: 218; Théry, 1928: 178; Obenberger, 1930a: 245 (as syn. of *rauca* F.); Schaefer, 1938: 81; 1949: 104; Cobos, 1986: 199, 312 (as sp.).

**Remarks.** This species for a long time was considered to be a synonym of *S. rauca* F. Schaefer (1938, 1949) resurrected it as a distinct species and discussed its synonymy. This nearly circummediterranean species does not form distinguishable geographical races, except the slightly different form from Sicily, which can be regarded as a separate subspecies.

### *Sphenoptera (Deudora) gemmata gemmata* (Olivier, 1790)

*lineata* Fabricius, 1792: 211 (*Buprestis*) (non Fabricius, 1775); Gory & Laporte, 1839: 19 (as sp.); Marseul, 1865: 369 (as syn. of *geminata* Ill.); Saunders, 1871: 88; Kerremans, 1892: 190 (as syn. of *lineola* Herbst); Théry, 1928: 178 (as syn. of *rauca* F.); Obenberger, 1929a: 40 (as *rauca* F., ssp.) (Syn.: Schaefer, 1949).

*lineola* Herbst, 1801: 284 (*Buprestis*); Gory & Laporte, 1839: 19 (as syn. of *lineata* F.); Marseul, 1865: 369 (as syn. of *geminata* Ill.); Saunders, 1871: 88; Kerremans, 1892: 190 (as sp.); Kerremans, 1913: 218; Théry, 1928: 178 (as syn. of *rauca* F.); Obenberger, 1930a: 246 (as syn. of *rauca lineata* F.) (Syn.: Schaefer, 1949).

*raucoides* Obenberger, 1920: 119; Théry, 1928: 178 (as syn. of *rauca* F.), **syn. n.**  
*geminata* var. *laevis* Rey, 1891: 19; Obenberger, 1929a: 40 (as *rauca* F., ab.); Schaefer, 1949: 107 (as *gemma-ta* ab.); Cobos, 1986: 199 (as *gemma-ta* f.).

*Type material examined.* *S. raucoides* Obenb., lectotype (designated here, NMPC): ♀, Algeria (h).

*Remarks.* The comparison of the lectotype of *S. raucoides* Obenb. with the series of *S. gemmata gemmata* Ol. from many localities has shown their conspecificity.

*Note.* *S. geminata* var. *laevis* Rey, 1891 is described from Corsica and thus may be regarded as having subspecies rank.

*Distribution.* Egypt, Algeria, Morocco, Iberian Peninsula, Southern France (Corsica incl.), Italy (Sardinia incl.), Croatia, ?Greece, ?Turkey, Syria, Israel. Reported by Schaefer (1949) and Curletti (1994) from Greece and former Yugoslavia; Mühle et al. (2000) did not agree with these records.

### Sphenoptera (*Deudora*) *gemma-ta sicelidis* Obenberger, 1916

*sicelidis* Obenberger, 1916: 251; 1929a: 25 (as sp.); Curletti, 1994: 47 (as ssp.).  
*rauca* ab. *quadrifossa* Obenberger, 1929a: 40 (key), 1930b: 238 (descr.); Cobos, 1986: 199 (as *gemma-ta*, ab.) (unavailable name).

*Type material examined.* *S. sicelidis* Obenb., lectotype (designated here, NMPC): ♂, Girgenti [Italy: Sicily] (h)/ Inv. 26657.

– *S. rauca* ab. *quadrifossa* Obenb., lectotype (designated here, NMPC): ♀, Palermo [Italy: Sicily], VIII.04 (h).

*Distribution.* Italy (Sicily).

### Sphenoptera (*Deudora*) *signata* Jakovlev, 1887

*signata* Jakovlev, 1887: 65.  
*obsoleta* Jakovlev, 1891: 136, **syn. n.**  
*satelles* Jakovlev, 1898a: 329 (cat.), 331 (descr.), 334 (key), **syn. n.**  
*addenda* Jakovlev, 1900: 403 (key), 413 (descr.), **syn. n.**  
*jejuna* Jakovlev, 1900: 405 (key), 417 (descr.), **syn. n.**  
*detrita* Jakovlev, 1902: 568 (key), 572 (descr.), 580 (cat.), **syn. n.**  
*satellites*: Kerremans, 1913: 194 (key), 225 (descr.) (incorrect spelling of *satelles* Jak.).  
*destituta* Obenberger, 1929a: 46 (key), 1930b: 245 (descr.), **syn. n.**  
*julia* Obenberger, 1929a: 50 (key), 1930b: 248 (descr.), **syn. n.**  
*araxicola* Obenberger, 1929a: 50 (key), 1930b: 248 (descr.), **syn. n.**  
*buresi* Obenberger, 1933: 61, **syn. n.**  
*hierosolymitana* Obenberger, 1946: 25, **syn. n.**  
*jureceki* Obenberger, 1946: 26, **syn. n.**  
*arsinoe* Obenberger, 1952: 22, **syn. n.**  
*gyaurdagensis* Obenberger, 1955: 14, **syn. n.**

*Type material examined.* *S. signata* Jak., lectotype (designated here, MNHN): ♂, Russ. Merid., Kraatz.

– *S. satelles* Jak., lectotype (designated here, ZIN): ♂, Caucasus, Araxesthal [Arax valley], Leder, Reitter (p)/ Type (p) satelles Jak. (h)/ siewersi Rtt., 105 (h).

– *S. addenda* Jak., lectotype (designated here, ZIN): ♂, Amasia [Turkey] (h)/ Reitter (p)/ addenda (h)/ Type (p).

– *S. jejuna* Jak., lectotype (designated here, ZIN): ♂, Caucasus, Araxesthal [Arax valley], Leder, Reitter (p)/ Type (p)/ jejuna (h)/ ?satelles Jak.? (h).

– *S. detrita* Jak., lectotype (designated here, ZIN): ♂, Caucasus, Araxesthal [Arax valley], Leder, Reitter (p)/ Type (p)/ detrita m. (h).

– *S. destituta* Obenb., holotype (NMPC): ♀, Siria [Syria] (h, rus.).

– *S. julia* Obenb., lectotype (designated here, NMPC): ♀, Chusistan [Iran] (h).

– *S. araxicola* Obenb., lectotype (designated here, NMPC): ♀, Caucasus, Araxesthal [Arax valley], Leder, Reitter (p).

– *S. buresi* Obenb., holotype (NMPC): ♂, Pirin, Maced. [Bulgaria], 5.VI.29, Maran et Taborsky lgt. (p)/ Synonym of *S. gemmata* Oliv., det. Brandl, Mühle et Niehuis, 1996 (p).

– *S. hierosolymitana* Obenb., holotype (NMPC): ♂, Jerusalem, Palaestina [Israel], Houska (p), 4.V.1945 (h, on back side).

– *S. jureceki* Obenb., lectotype (designated here, NMPC): ♀, Jerusalem [Israel], 16.4.43 (h).

– *S. arsinoe* Obenb., lectotype (designated here, NMPC): ♂, Shiraz, Perse [Iran] (h).

– *S. gyaurdagensis* Obenb., holotype (NMPC): ♂, Gyaurdag or, Anat. [Turkey], 17.VIII.47, Exp. N. Mus. CSR.

*Additional material examined:* *Sphenoptera obsoleta* Jak. (ZIN), ♂, Asic Min. [Turkey] (h)/ Type (p) [sic!]/ *Sphenoptera obsoleta* Jak. (h), B. Jakovlev det. (p).

– *Sphenoptera signata*: Obenb. (NMPC), ♂, Ros. Turkest. (h)/ *Sphenoptera signata* Jak. (h), Det. Dr. Obenberger (p)/ Type (p) [sic!].

*Remarks.* The examination of type specimens of above mentioned species, authentic specimen of *S. obsoleta* Jak. and large series from different localities has proven that all of them are conspecific.

*Notes.* *S. signata* Jak. was described from “Russie meridionale (Kindermann); coll. de Mr. Kraatz”. It is highly probable that the type specimen of *S. signata* originated actually from Transcaucasia where this species is rather common. The origin of the above mentioned specimen in Obenberger’s collection (Russian Turkestan), is not clear. According to the original description, the type locality and the collector of *S. obsoleta* Jak. are as follows: “Transcaucase: Tiflis (M. Leder). Coll. de M. Reitter”; specimens with such a label were not found in collections examined. One paralectotype of *S. jureceki* Obenb. in NMPC belongs to *S. smyrneensis* Lap.

*Distribution.* Azerbaijan, Armenia, Bulgaria, Greece, Israel, Syria, Turkey, Iran, Turkmenistan; ?Southern European Russia, ?Central Asia.

### Sphenoptera (*Deudora*) *vittaticollis* Lucas, 1844

*vittaticollis* Lucas, 1844: 50; Marseul, 1865: 362; Saunders, 1871: 87; Kerremans, 1892: 197 (as sp.); Théry, 1928: 178 (as syn. of *rauca* F.); Obenberger, 1929a:

54; 1930a: 249; 1930b: 254 (as sp.); Schaefer, 1949: 106 (as ?sp.); Cobos, 1986: 312 (as *gemmata* Ol., ssp.).

*sulcata* Marseul, 1865: 367 (non Fischer von Waldheim, 1824); Saunders, 1871: 88; Kerremans, 1892: 196 (as sp.); Théry, 1928: 178 (as *rauca* F., syn.); Obenberger, 1930b: 254 (as sp.); Schaefer, 1949: 106 (as syn. of *kordofana*); Cobos, 1986: 312 (as syn. of *gemmata vittaticollis* Luc.).

*aulacophora* Jacobson, 1912: 136 (replacement name for *sulcata* Marseul).

*glyphoderes*: Obenberger, 1929a: 54 (misidentification, non Abeille de Perrin, 1901); 1930b: 254 (correction). *korfodana* Kerremans, 1913: 191 (key), 213 (descr.) (replacement name for *S. sulcata* Marseul).

*kordofana*: Obenberger, 1915: 51; Théry, 1928: 178 (as syn. of *rauca* F.); Schaefer, 1949: 106 (as ?sp.); Cobos, 1986: 312 (as syn. of *gemmata vittaticollis* Luc.) (incorrect subsequent spelling).

*rotundicollis*: Mühle et al., 2000: 91 (misidentification, non Gory & Laporte, 1839).

*Type material examined.* *S. sulcata* Mars., lectotype (designated here, MNHN): ♀, [bottom label] *sulcata* Koll. Ab. 65. II. 399, Egypt (h)/ *Sphenoptera sulcata* Koll., ♀, Egypt. [illegible] (h, round, blue). Paralectotypes (MNHN): 1♂, *Sphenoptera sulcata* Koll., ♂, Nubia? (h, round, blue) [near the same bottom label as in lectotype]; 1♂, *sulcata* Koll. Kordofan (h)/ *lineata* Fabr. (h)/ *geminata* Illig. Espagne, Syrie, Algerie (h)/ ex Musaeo Mniszecz (p); 1♀, *sulcata* ♀ (h, blue)/ ex Musaeo Mniszecz (p); 1♀, ex Musaeo Mniszecz (p).

*Additional material examined.* *S. korfodana* Kerr., 1 ex. (MNHN): Egypte Staud. (h)/ *sulcata* Mars. (h)/ *S. kordofana* Kerr. Egypt (h)/ Museum Paris, Coll. Ch. Kerremans, 1923 (p).

*Remarks.* Mühle et al. (2000) used the name *S. rotundicollis* Gory & Lap. as a senior synonym of *S. sulcata* Mars., *S. glyphoderes* Ab., and *S. aulacophora* Jacobs. Actually, the name *S. glyphoderes* was proposed as a replacement name for *S. sculpticollis* Abeille de Perrin, 1900 (non Heyden, 1886) and *S. aulacophora* as a replacement name for *S. sulcata* Mars. (non Fischer von Waldheim, 1824). Kerremans (1913) repeatedly used the spelling “*S. korfodana*”, that imply the type locality “Korfodan” instead of “Kordofan”. Obenberger (1915) corrected the spelling as “*kordofana*», and that was accepted by all subsequent authors in spite of the fact that it was an incorrect subsequent spelling according to the Code.

*Note.* *S. vittaticollis* Luc. is very closely related to *S. gemmata*, and its species rank needs confirmation. It differs from *S. gemmata* (Ol.) in the more distinct and rough sculpture of pronotum and elytra; tibiae more widened with better marked incisions and teeth; slightly different male genitalia. According to the personal communication of S. Bílý and V. Kubáň, fresh specimens of *S. vittaticollis* are completely covered with white or yellowish wax clothing and this species occurs on different host plants with *S. gemmata*.

*Distribution.* Algeria, Morocco, Tunis, Egypt, Sudan, Israel.

## *Sphenoptera* (*Deudora*) *aeneomicans* Kraatz, 1882

*aeneomicans* Kraatz, 1882: 317.

*unidentata* Jakovlev, 1891: 137, **syn. n.**

*veselyi* Obenberger, 1915: 53 (subgen. *Sphenoptera* s. str.); 1929a: 47 (subgen. *Deudora*), **syn. n.**

*aladaghensis* Obenberger, 1920: 116 (subgen. *Sphenoptera* s. str.); 1929a: 48 (subgen. *Deudora*), **syn. n.**

*aeneofulgens* Obenberger, 1929a: 26 (key), 120 (descr.), **syn. n.**

*persica* Obenberger, 1929a: 26 (key), 121 (descr.), **syn. n.**

*ushinskii* Obenberger, 1929a: 26 (key), 122 (descr.), **syn. n.**

*ahriman* Obenberger, 1929a: 48 (key), 1930b: 246 (descr.), **syn. n.**

*amasiae* Obenberger, 1929a: 49 (key), 1930b: 247 (descr.), **syn. n.**

*baicalensis* Obenberger, 1929a: 53 (key), 1930b: 253 (descr.) (patria falsa), **syn. n.**

*fabichi* Obenberger, 1952: 14, **syn. n.**

*fleischeri* Obenberger, 1952: 15, **syn. n.**

*moganensis* Obenberger, 1955: 12, **syn. n.**

*hoberlandti* Obenberger, 1955: 13, **syn. n.**

*Type material examined.* *S. aeneomicans* Kr., holotype (DEI): ?♀, Samark. [Uzbekistan], **Stgr. 8** (p) 1 (h)/ 474 (h)/ Holotypus (p, red)/ *breviuscula* Krtz. i.l. (h)/ Daniel vid. (h)/ [pink square]/ *aeneomicans* Kraatz (h)/ 60 (p)/ coll. L.v. Heyden, DEI, Eberswalde (p).

– *S. unidentata* Jak., lectotype (designated here, ZIN): ♂, Ferghana [Uzbekistan] (h)/ Type (p)/ *unidentata* Jak. (h). Paralectotypes: 3♂, Tashkent [Uzbekistan] (h, rus); 1♀, Kuyuk [Turkey] (h, rus); 1♀, Tokat [Turkey] (h)/ Staud. 100 (h).

– *S. veselyi* Obenb., holotype (NMPC): ♂, Araxes [Arax valley], Dr. Vesely (p)/ *Sphenoptera micans* Jak., cum typo comp. (h), Alexeev det. (p)/ *Sphenoptera* (*Deudora*) *unidentata* Jak., det. M. Niehuis, 1999 (p).

– *S. aladaghensis* Obenb., lectotype (designated here, NMPC): ♂, Persia, Ala-dagh, Budschnurd [Iran], 1033 m, 5.1902, Coll. Hauser (p).

– *S. aeneofulgens* Obenb., lectotype (designated here, NMPC): ♂, Turkestan, Fergana [Uzbekistan] (h, rus.).

– *S. persica* Obenb., lectotype (designated here, NMPC): ♀, Luristan [Iran] (h).

– *S. ushinskii* Obenb., lectotype (designated here, NMPC): ♂, Tschardshui [Turkmenistan] (p), 1.V.927 (h), Ushinski (p).

– *S. ahriman* Obenb., lectotype (designated here, NMPC): ♂, v. Bodemeyer, Persien, Luristan [Iran] (p); 2 paralectotypes, ♀, the same data.

– *S. amasiae* Obenb., lectotype (designated here, NMPC): ♀, Amasia [Turkey] (h)/ *amasiae* Ob. = *hoberlandti* Ob. (h), det. O. Niehuis '96 (p).

– *S. baicalensis* Obenb., lectotype (designated here, NMPC): ♂, Baykal (h, rus.) Inv. 26209.

– *S. fabichi* Obenb., lectotype (designated here, NMPC): ♀, Asia m., Armenia [Turkey] [Uzbekistan] (h)/ *Sphenoptera unidentata* Jak. (*ahriman* Obb.), det. M. Niehuis, 1998 (p).

– *S. fleischeri* Obenb., lectotype (designated here, NMPC): ♂, Turkestan (h).

– *S. moganensis* Obenb., holotype (NMPC): ♀, Mogan golu, Anat. [Turkey], 8.vii.47, Exp. N. Mus. CSR.

– *S. hoberlandti* Obenb., holotype (NMPC): ♀, Ankara-Baraj, Anat. [Turkey], 3-4.vii.47, Exp. N. Mus. CSR (p).

*Additional material examined.* *S. aeneomicans*: 1 specimen (NMPC): ♂, Samarkand [Uzbekistan] (h)/ Type [Obenberger's standard]/ *aeneomicans* Kr. (h), Dr. Obenberger det. (p, with red mark in the corner); 1 specimen (MNHN): (sex unknown), Margelan [Uzbekistan],

Staudinger (h) [red square]/ aeneomicans Kr. (h) vu par Kerremans pour sa Monographie (p).

**Remarks.** One of the most widely distributed species of *Deudora* repeatedly described from several localities. The comparison of type specimens of all above mentioned species and extensive additional material has shown that in spite of some minor differences in the sculpture of surface and body shape they are conspecific. The type locality of *S. baicalensis* Obenb., "Sibirien: Umgebung von Baykalsee" is obviously erroneous.

**Notes.** In the same publication, Kraatz (1882) described several species of *Sphenoptera* (*S. purpuriventris* Kr., *S. dubia* Kr., *S. propinqua* Kr., *S. lucidicollis* Kr., *S. viridicoerulea* Kr., *S. aeneomicans* Kr., *S. viridiaurea* Kr., *S. subtricornata* Kr.) collected in Samarkand by Haberhauer. Each species was represented by a single specimen and thus they were holotypes. However, according to Gaedike (1985), no specimens of Kraatz's species, except for the holotype of *S. aeneomicans* from Heyden's collection, are deposited in DEI. Meanwhile, in Obenberger's collection (NMPC) we found specimens of all Kraatz's species from Samarkand bearing standard Obenberger's labels "Type" and "[species name] Dr. Obenberger det." with red mark in the corner that never occurs in type specimens of species described by Obenberger himself. It may be supposed that the above mentioned specimens originate from Kraatz's collection and are the real holotypes, but this assumption cannot be proved. We keep the holotype status for *S. aeneomicans* specimen from DEI, as it was indicated by Gaedike (1985), and designate the specimens of other Kraatz's species from Obenberger's collection as "holotype" with question mark, that is also true for *S. incerta* Jak., which, according to Jakovlev (1887), originated from Kraatz's collection, but was found in Obenberger's collection with the same red mark on determination label.

**Distribution.** Turkey, Azerbaijan, Armenia, Georgia, Iran, Afghanistan, Turkmenistan, Kyrgyzstan, Kazakhstan, Tajikistan, Uzbekistan, Northwestern China.

### ***Sphenoptera* (*Deudora*) *acuminata* Jakovlev, 1898**

*acuminata* Jakovlev, 1898a: 331 (descr.), 334 (key).

**Type material examined.** *S. acuminata* Jak., lectotype (designated here, ZIN): ♀, Kiesw. (h)/ Ganglb. (h)/ Type (p)/ Astrabad [Iran, Gorgan] (h)/ aeneomicans? (h)/ acuminata (h)/ acuminata Jak. (h).

**Distribution.** The species is known from the type locality only.

### ***Sphenoptera* (*Deudora*) *misella* Jakovlev, 1900**

*misella* Jakovlev, 1900: 403 (key), 415 (descr.).

*liliputana* Obenberger, 1929a: 52 (key), 1930b: 251 (descr.), **syn. n.**

*callimicra* Obenberger, 1929a: 53 (key), 1930b: 252 (descr.), **syn. n.**

**Type material examined.** *S. misella* Jak., lectotype (designated here, ZIN): ♂, Caucasus, Araxesthal [Arax valley], Leder, Reitter (p)/ Type (p)/ *misella* (h)/ *misella* Jak. (h).

– *S. liliputana* Obenb., lectotype (designated here, NMPC): ♀, Asia minor [Turkey] (h).

– *S. callimicra* Obenb., lectotype (designated here, NMPC): ♀, v. Bodemeyer, Persien, Luristan [Iran] (p).

**Remarks.** The comparison of type specimens of above mentioned species and several specimens from different localities has shown that in spite of some minor differences mainly in the sculpture of surface, body shape and size they undoubtedly belong to the same species.

**Distribution.** Armenia, Georgia, Turkey, Iran.

### ***Sphenoptera* (*Deudora*) *inculta* Obenberger, 1929**

*inculta* Obenberger, 1929a: 42 (key), 1930b: 239 (descr.).  
*confusa*: Kerremans, 1913: 104 (part., misidentification).

**Type material examined.** *S. inculta* Obenb., lectotype (designated here, NMPC): ♂, v. Bodemeyer, Persien, Luristan [Iran] (p); 1 paralectotype, ♀, the same data.

**Additional material examined.** *S. confusa* Kerr. (MNHN): ♀, v. Bodemeyer, Persien, Luristan [Iran] (p)/ Paratype (p, red in white paper) [non original museum label]/ *Sphenoptera confusa* Kerr. (h) vu par Kerremans pour sa Monographie (p).

**Note.** It is not clear whether the specimen from MNHN belongs to the type series of *S. confusa* Kerr., because it has no Kerremans's type label. It is obviously conspecific with the types of *S. inculta* Obenb.

**Distribution.** Iran.

### ***Sphenoptera* (*Deudora*) *incerta* Jakovlev, 1887**

*incerta* Jakovlev, 1887: 57.

*dolens* Jakovlev, 1893: 133, **syn. n.**

*confusa* Kerremans, 1913: 27 (key), 104 (descr.); Obenberger, 1927: 47 (subgen. *Sphenoptera* s. str.), **syn. n.**  
*joukli* Obenberger, 1929a: 22 (key), 118 (descr.), **syn. n.**  
*christophi*: Kerremans, 1913: 66 (non Jakovlev, 1887; misidentification).

**Type material examined.** *S. incerta* Jak., lectotype (designated here, NMPC): ♂, Caucasus (h)/ Inv. 26171/ Type (Obenberger's standard)/ *incerta* Jak. (h), Dr. Obenberger det. (p, with red mark in the corner)/ *Sphenoptera armena* Stev., cum typo comp. (h), Alexeev det. (p).

– *S. dolens* Jak., lectotype (designated here, ZIN): ♂, [red square]/ Caucas. [Transcaucasia], Staud. 85 (h)/ Type (p)/ *dolens* (h)/ *dolens* Jak. (h).

– *S. confusa* Kerr., lectotype (designated here, MNHN): ♂, v. Bodemeyer, Persien, Luristan [Iran] (p)/ *confusa* Kerr., Type (h)/ Museum Paris, Coll. Ch. Kerremans, 1923 (p); 1 paralectotype (NMPC): ♂, v. Bodemeyer, Persien, Luristan [Iran] (p)/ *confusa* Kerr., Type (h)/ *confusa* Kerr. (h), Dr. Obenberger det. (p)/ Typus [Obenberger's standard].

– *S. joukli* Obenb., lectotype (designated here, NMPC): ♂, Anatolia [Turkey] (h).

*Additional material examined.* *S. christophi*: Kerr. (MNHN): ♂, v. Bodemeyer, Persien, Louristan [Iran] (p)/ *Sphenoptera christophi* Jak. (h) vu par Kerremans pour sa Monographie (p).

*Remarks.* Though both Kerremans and Obenberger attributed *S. confusa* Kerr. to *Sphenoptera* s. str., the study of type specimen has shown that it belongs to *Deudora* and is conspecific with *S. incerta* Jak.; *S. dolens* Jak. and *S. joukli* Obenb. belong to the same species as well. *S. confusa* var. *limbifera* Obenberger (1927) (unavailable name) actually belongs to *S.* (s. str.) *tragacanthae* Klug [type specimen in NMPC: v. Bodemeyer, Persien, Louristan [Iran] (p)].

*Notes.* The type data of *S. incerta* Jak. are as follows: "Caucase: Ordoubad [Azerbaijan, Nachichevan AR] (Christoph), coll. de Mr. Kraatz". The type specimen in Obenberger's collection (NMPC) originated supposedly from Kraatz's collection (see *S. aeneomicans* Kr., notes).

*Distribution.* Turkey, Armenia, Azerbaijan, Iran.

### *Sphenoptera* (*Deudora*) *armena* (Steven, 1829)

*armena* Steven, 1829: 286 (*Buprestis*).

*Type material examined.* *S. armena* Stev., neotype (designated here, ZIN): ♀, Armenia (p)/ *Sphenoptera armena* Stev. ex coll. Ballion (h).

*Remarks.* This species has remained unknown to all subsequent authors. The name "*S. armena*" as used by Kerremans (1913) and Obenberger (1927, 1930) is a misidentification and belongs to some forms of *S.* (s. str.) *tragacanthae* (Klug).

*Note.* We did not find any specimens of *S. armena* in Steven's collection (Zoological Museum of Moscow State University). The specimen mentioned above was deposited in the collection of V.N. Stepanov (ZIN) and, possibly, originated from Ballion's collection (Odessa, Ukraine). It is extremely doubtful that this specimen is a real type of Steven. However, we found that it is a distinct *Deudora* species closely related to *S. incerta* Jak. and matching Steven's description. Therefore, we designate this specimen as the neotype.

*Distribution.* The species is known from the type locality only: "Armenia, provincia Choi", which corresponds to district of Khoi in North-Western Iran.

### *Sphenoptera* (*Deudora*) *improvisa* Jakovlev, 1902

*improvisa* Jakovlev, 1902: 566 (key), 575 (descr.), 580 (cat.).

*Type material examined.* *S. improvisa* Jak., lectotype (designated here, ZIN): ♂, Zeitoun [Turkey], Staud. 52 (h)/ Type (p)/ *improvisa* (h).

*Additional material examined.* 1 ♀ (NMPC): Taurus sept., Ulukisla, [Turkey], 1800 m, Novický (h).

*Distribution.* Turkey.

### *Sphenoptera* (*Deudora*) *koenigi* Jakovlev, 1891

*koenigi* Jakovlev, 1891: 133.

*integripennis* Obenberger, 1929a: 20 (key), 116 (descr.), syn. n.

*alma* Obenberger, 1952: 11, syn. n.

*Type material examined.* *S. koenigi* Jak., lectotype (designated here, ZIN): ♀, Trans-caspi g., Turcmenien [Turkmenistan], E. Koenig (p)/ Type (p)/ *koenigi* m. (h).

– *S. integripennis* Obenb., lectotype (designated here, NMPC): ♂, Ashabad [Turkmenistan] (h).

– *S. alma* Obenb., lectotype (designated here, NMPC): ♀, Turkestan, Aschabad [Turkmenistan] (h).

*Remarks.* The comparison of the type specimens of above mentioned species, as well as series from several localities has shown that they are conspecific.

*Note.* The type locality of *S. integripennis* Obenb. was erroneously published as "Persien: Astrabad".

*Distribution.* Iran, Kazakhstan, Turkmenistan.

### *Sphenoptera* (*Deudora*) *sulciventris* Jakovlev, 1886

*dubia* Kraatz, 1882: 315 (non Saunders, 1871).

*sulciventris* Jakovlev, 1886: 98.

*kraatzii* Jakovlev, 1887: 56 (replacement name for *S. dubia* Kraatz), syn. n.

*alaiensis* Jakovlev, 1893: 132, syn. n.

*dives* Jakovlev, 1902: 567 (key), 573 (descr.), 580 (cat.), syn. n.

*aucta* Jakovlev, 1902: 569 (key, descr.), 579 (cat.), syn. n.

*jaxartii* Obenberger, 1929a: 36 (key), 1930b: 233 (descr.), syn. n.

*kuliabensis* Obenberger, 1952: 9, syn. n.

*kraatzii* var. *cupreella* Obenberger, 1929a: 20 (key), 115 (descr.) (non Kerremans, 1913) (unavailable name).

*Type material examined.* *S. dubia* Kr. (*kraatzii* Jak.), holotype (NMPC): ♂, Samarkand (h)/ Type (Obenberger's standard)/ *kraatzii* Jak. (h), Dr. J. Obenberger det. (p, with red mark in the corner).

– *S. sulciventris* Jak., lectotype (designated here, ZIN): ♂, Tourkest. Koushakew. (h)/ 382 (h)/ *sulciventris* m. (h, Jak.)/ *sulciventris* Jak. (h).

– *S. alaiensis* Jak., lectotype (designated here, ZIN): ♂, [red square]/ Alai [Range] [Kyrgyzstan or Tajikistan], Std. 85 (h)/ *alaiensis* (h).

– *S. dives* Jak., lectotype (designated here, ZIN): ♂, Gissar. [Range], verk. r. Tupalanga [Uzbekistan], E. Vilberg, 1898 (h, rus)/ *dives* (h). Paralectotypes: 1 ♀, the same data; 1 ♂, no geographical label, but bearing determination and type designation by Jakovlev.

– *S. aucta* Jak., lectotype (designated here, ZIN): ♀, [red square]/ Aulie-ata [Kazakhstan, Zhambyl, currently Taraz], E. Willberg (h)/ Type (p)/ *aucta* (h); 1 paralectotype: ♀, the same data/ [red square].

– *S. jaxartii* Obenb., lectotype (designated here, NMPC): ♀, Samarkand [Uzbekistan] (h).

– *S. kuliabensis* Obenb., lectotype (designated here, NMPC): ♀, Prov. Kuliab, Ak-sou-Thal [Tajikistan], F. Hauser, 1898 (p)/ Inv. 26283/ *Sphenoptera dives* Jak. (h), Alexeev det. (p)/ cum typo comp. (h), Alexeev det. (p).

– *S. kraatzii* var. *cupreella* Obenb., lectotype (designated here, NMPC): ♂, Prov. Kuliab, Ak-sou-Thal [Tajikistan], F. Hauser, 1898 (p)/ *kraatzii* var. *cupreomicans* m. = II *cupreella* m. (h), det. Dr. Obenberger (p).

*Note.* The presumed holotype of *S. dubia* Kr. in Obenberger's collection (NMPC) originated supposedly from Kraatz's collection (see *S. aeneomicans* Kr., notes). *S. kraatzii* var. *cupreella* Obenb. is an infrasubspecific form according to Article 45.6.1 of ICZN.

*Distribution.* Kazakhstan, Uzbekistan, Tajikistan, Kyrgyzstan, Afghanistan.

### **Sphenoptera (*Deudora*) bucharica** Jakovlev, 1900

*bucharica* Jakovlev, 1900: 405 (key), 422 (descr.).  
*bactriana* Jakovlev, 1902: 569 (key), 576 (descr.), 581 (cat.), **syn. n.**

*Type material examined.* *S. bucharica* Jak., lectotype (designated here, ZIN): ♂, Buchara [Uzbekistan or Tajikistan] (h)/ Type (h)/ Reitter (p)/ D. bucharica (h).  
– *S. bactriana* Jak., lectotype (designated here, ZIN): ♀, [green square]/ Buchara [Uzbekistan or Tajikistan] (h)/ Type (p)/ bactriana m. (li).

*Remarks.* The comparison of type specimens of both species and examination of series from several localities has shown that they are conspecific in spite of some minor differences in the sculpture and body shape.

*Distribution.* Kazakhstan, Tajikistan, Turkmenistan, Uzbekistan.

### **Sphenoptera (*Deudora*) hamata** Jakovlev, 1899

*hamata* Jakovlev, 1899: 101.  
*zarawshanensis* Obenberger, 1929a: 51 (key), 1930b: 249 (descr.), **syn. n.**

*Type material examined.* *S. hamata* Jak., holotype (ZIN): ♂, Seravshan [Zeravshan river], Kschitit, Artutsh [Tajikistan], Glasunov, 1892 (p)/ Type (p)/ hamata (h).  
– *S. zarawshanensis* Obenb., lectotype (designated here, NMPC): ♀, Sarafschan [Zeravshan river], Turkestan [Uzbekistan or Tajikistan] (p)/ Sphenoptera hamata Jak., Alexeev det. (p) cum typo comp. (h), Alexeev det. (p).

*Remarks.* The comparison of type specimens of these species and series from several localities has shown that, in spite of some minor differences in the body shape, size and sculpture, they undoubtedly belong to the same species.

*Distribution.* Uzbekistan, Kyrgyzstan, Tajikistan, Afghanistan.

### **Sphenoptera (*Deudora*) sculpticollis** Heyden, 1886

*sculpticollis* Heyden, 1886: 278.  
*akbesiana* Obenberger, 1920: 120 (Syn.: Niehuis, 1999).  
*alutaceiceps* Obenberger, 1929a: 17 (key), 111 (descr.), **syn. n.**

*morgani* Obenberger, 1929a: 18 (key), 114 (descr.), **syn. n.**  
*sculpticollis* var. *costulosa* Obenberger, 1952: 8 (unavailable name).  
*sculpticollis* var. *punctuliseriata* Obenberger, 1952: 8 (unavailable name).

*Type material examined.* *S. sculpticollis* Heyd., lectotype (designated here, DEI): ♂, Malatie [Turkey], Kraatz (h)/ sculpticollis Heyd. Type (h)/ Sphenoptera sculpticollis Heyd. (h), Det. Dr. Obenberger (p)/ Syntypus (p, red)/ Coll. DEI, Eberswalde (p.)/ coll. DEI, Eberswalde (p.); 1 paralectotype (DEI): (sex unknown), Malatia, Mesopotam. [Turkey], Staudgr. 85 (p)/ 84 (p)/ D. (h)/ K (h, red square)/ 305. (h) [pink square]/ Syntypus (p, red)/ Coll. DEI, Eberswalde (p.)/ coll. DEI, Eberswalde (p.); 1 ?paralectotype (DEI): (sex unknown), Malatia [Turkey] (h)/ Coll. Kraatz (p)/ sculpticollis Hd. (h), Det. Dr. Obenberger (p).

– *S. akbesiana* Obenb., lectotype (designated here, NMPC): ♂, Akbes, Syr. [Turkey], coll. Winkler (p)/ Sphenoptera (*Deudora*) sculpticollis Heyd., det. M. Niehuis, 1998 (p) (Syn.: akbesiana Ob., alutaceiceps Ob.), det. M. Niehuis, 1998 (p).

– *S. alutaceiceps* Obenb., lectotype (designated here, NMPC): ♀, Malatia [Turkey] (h)/ Inv. 26170.

– *S. morgani* Obenb., lectotype (designated here, NMPC): ♂, Khoremabad, Persia [Iran] (h)/ Sphenoptera (*Deudora*) sculpticollis Heyd., det. M. Niehuis, 1999 (p).

– *S. sculpticollis* var. *costulosa* Obenb., lectotype (designated here, NMPC): Djezin, Libanon (p).

– *S. sculpticollis* var. *punctuliseriata* Obenb., lectotype (designated here, NMPC): ♀, Djezin, Libanon (p).

*Remarks.* Only two type specimens mentioned in the original description (Heyden, 1886) exist; they are kept in Heyden's and Kraatz's collections. We designated the specimen bearing a handwritten type label as lectotype and the specimen with printed geographical label as paralectotype (both specimens listed by Gaedike, 1985 as syntypes). The third specimen with particular red mark on Obenberger's determination label from Kraatz collection is possibly one of the syntypes indicated in the original description, but this assumption is difficult to prove (see *S. aeneomicans*, notes).

*Notes.* *S. sculpticollis* var. *costulosa* Obenb. and *S. s.* var. *punctuliseriata* Obenb. are infrasubspecific forms according to Article 45.6.1 of ICZN. In the description of *S. alutaceiceps* Obenb., the type locality was cited as "Mingrelien" [in error?]. One specimen from the type series of *S. morgani* Obenb. belongs to a different subgenus and species.

*Distribution.* Israel, Lebanon, Syria, Turkey, Azerbaijan, Armenia, Georgia, Iran, Iraq.

### **Sphenoptera (*Deudora*) althaeae** Obenberger, 1929

*althaeae* Obenberger, 1929a: 17 (key), 112 (descr.).

*Type material examined.* *S. althaeae* Obenb., lectotype (designated here, NMPC): ♂, Chusistan [Iran] (h).

*Distribution.* The species is known from the type locality only: Iran, Khuzestan Prov.

### **Sphenoptera (*Deudora*) lederi** Jakovlev, 1891

*lederi* Jakovlev, 1891: 134.  
*ledereri*: Kerremans, 1892: 190 (misspelling).



*Type material examined.* *S. lederi* Jak., lectotype (designated here, MNHN): ♂, Syrien, Haifa [Israel], Reitter (p) lederi Jak., type (h) Typ. (h) Type (p) Museum Paris, Coll. Abeille de Perrin, 1919 (p).

*Distribution.* Israel (Haifa).

### Sphenoptera (Deudora) simplex Jakovlev, 1893

*simplex* Jakovlev, 1893: 130.

*fraterna* Jakovlev, 1900: 401 (key), 408 (descr.), **syn. n.**  
*allecta* Jakovlev, 1900: 401 (key), 410 (descr.), **syn. n.**  
*samoitica* Obenberger, 1929a: 32 (key), 128 (descr.), **syn. n.**  
*ankarana* Obenberger, 1952: 17, **syn. n.**

*Type material examined.* *S. simplex* Jak., lectotype (designated here, ZIN): ♂, [white circle] Asia m., Hadjin [Turkey], Staud. 95 (h) Type (h) simplex Jak. (h) allecta Jak. ? (h).

– *S. fraterna* Jak., lectotype (designated here, ZIN): ♀, Akbes [Turkey] (h) Reitter (p) Type (p) fraterna (h) fraterna Jak. (h).

– *S. allecta* Jak., lectotype (designated here, ZIN): ♂, Caucasus, Araxesthal [Arax valley], Leder, Reitter (p) Type (p) allecta (h); 1 paralectotype: ♂, [the same data] allecta 2.30 (h).

– *S. samoitica* Obenb., lectotype (designated here, NMPC): ♂, Santos [Greece] (h) Sphenoptera (Deudora) ankarana Ob., det. M. Niehuis, 2001 (p); 1 paralectotype, ♀, the same data.

– *S. ankarana* Obenb., lectotype (designated here, NMPC): ♀, Turkuic, Ankara [Turkey] (h).

*Remarks.* The comparison of type specimens of above mentioned species as well as the examination of series from many localities has confirmed their conspecificity.

*Distribution.* Greece (Samos & Chios islands), Turkey, Armenia, ?Azerbaijan, Iran.

### Sphenoptera (Deudora) tamerlani Obenberger, 1929

*tamerlani* Obenberger, 1929a: 32 (key), 127 (descr.).

*Type material examined.* *S. tamerlani* Obenb., lectotype (designated here, NMPC): ♂, Samarkand [Uzbekistan] (h).

*Distribution.* Uzbekistan, Tajikistan (**new record**).

The new record from Tajikistan is as follows: USSR, Tajik. SSR, Hissar Mts., 800 m, 30 km N of Dushanbe, Chor-Bel, 24-25.6.1983, Vít Kubáň leg., 6 specimens (TCB).

### Sphenoptera (Deudora) finitima Jakovlev, 1908

*finitima* Jakovlev, 1908a: 225.

*Type material examined.* *S. finitima* Jak., lectotype (designated here, ZIN): ♂, Bampur [Iran, Sistan and Baluchestan Prov., Karvander], 25.IV.1901, Zarudny (h, rus) Type (p) finitima (h).

*Distribution.* Iran: Sistan and Baluchestan Prov.

### Sphenoptera (Deudora) micans Jakovlev, 1886

*micans* Jakovlev, 1886: 93.

*binominata* Kerremans, 1913: 577, **syn. n.**

*irritatrix* Obenberger, 1929a: 37 (key, misspelled as *viridatrix*), 1930b: 234 (descr., corrected spelling), **syn. n.**

*shah* Obenberger, 1929a: 37 (key), 1930b: 235 (descr.), **syn. n.**

*pseudomicans* Obenberger, 1929a: 42 (key), 1930b: 240 (descr.), **syn. n.**

*escalerae* Obenberger, 1929a: 43 (key), 1930b: 242 (descr.), **syn. n.**

*Type material examined.* *S. micans* Jak., lectotype (designated here, ZIN): ♂, Ganglb. (h) Asthrabad [Iran, Gorgan] (h). Paralectotypes: 1 ♀ (ZIN), Pers. [Iran] (h) micans Jak., typ (h) micans, col. Jakovlev (h); 1 ♀ (ZIN), Hadshyabad [Iran] (h) Ganglb. (h) micans Jak. (h) Type (p); 1 specimen (sex unknown) (NMW): Kiesw. (h) Asthrabad [Iran, Gorgan] (h) micans Jak., Typ. (h) Type (p, red).

– *S. binominata* Kerr., lectotype (designated here, MNHN): ♂, Caucase [?Transcaucasia], Kraatz (h) aenea Kraatz, Type (h) binominata Kerr., Type (h) Museum Paris, Coll. Ch. Kerremans, 1923 (p).

– *S. irritatrix* Obenb., lectotype (designated here, NMPC): ♂, Caucasus (h).

– *S. shah* Obenb., lectotype (designated here, NMPC): ♀, Persia [Iran] (h).

– *S. pseudomicans* Obenb., lectotype (designated here, NMPC): ♀, Astrabad [Iran, Gorgan] (h) D. micans B. Jak., teste et determinatione B. Jakovlev (incorrecta) (h), Det. Dr. Obenberger (p).

– *S. escalerae* Obenb., lectotype (designated here, NMPC): ♀, Mtes. Taurus, Saghir-Dagh [Turkey], vi. 1898, Escalera (p).

*Remarks.* The comparison of type specimens of above mentioned species as well as examination of several specimens from different localities has shown their conspecificity.

*Note.* Obenberger (1929a: 37) mentioned the name "*viridatrix* m. n. sp." only once in the key in the first part of his revision of subgenus *Deudora*. In the second part published in the same volume of the magazine (Obenberger, 1930b), the name "*irritatrix*" was used under the same number "63". In the world catalogue (Obenberger, 1930a), "*viridatrix*" was indicated as "error impressoris" and placed in synonymy with *S. irritatrix*. In accordance with Art. 32.5.1.1, "*irritatrix*" should be considered the correct original spelling.

*Distribution.* Armenia, Turkey, Iran.

### Sphenoptera (Deudora) parysatis Obenberger, 1929

*parysatis* Obenberger, 1929a: 43 (key), 1930b: 241 (descr.).

*isfahanensis* Obenberger, 1952: 8, **syn. n.**

*proserpina* Obenberger, 1952: 10, **syn. n.**

*Type material examined.* *S. parysatis* Obenb., lectotype (designated here, NMPC): ♀, Perse, Bazouff [Iran], M. Escalera, 1899 (p).

– *S. isfahanensis* Obenb., lectotype (designated here, NMPC): ♀, Isfahan, Persia [Iran], IX (h).

– *S. proserpina* Obenb., lectotype (designated here, NMPC): ♀, Isfahan, Persia [Iran], IX (h).

**Remarks.** This species was described by Obenberger three times, though 2 “species” originated from the same series. The comparison of type specimens has shown that, in spite of some minor differences in the body shape and sculpture, they undoubtedly belong to the same species.

**Distribution.** Iran.

### **Sphenoptera (*Deudora*) manifesta** Jakovlev, 1900

*manifesta* Jakovlev, 1900: 428 (subgen. *Sphenoptera* s. str.); 1902: 565 (subgen. *Deudora*).

*megarauca* Obenberger, 1952: 21, **syn. n.**

**Type material examined.** *S. manifesta* Jak., lectotype (designated here, ZIN): ♂, Caucasus, Araxesthal [Arax valley], Leder, Reitter (p)/ Reiter (p)/ manifesta m. (h)/ manifesta Jak. (h); 1 paralectotype, ♀, [the same data]/ manifesta Jak. (h).

– *S. megarauca* Obenb., lectotype (designated here, NMPC): ♀, Mtschet prope Tiflis [Georgia, Mtskheta near Tbilisi], v. 14 (p)/ Inv. 26176/ *Sphenoptera manifesta* Jak. (h), Alexeev det. (p).

**Remarks.** Comparison of type specimens and several specimens of this rare species has shown their conspecificity.

**Distribution.** Azerbaijan (Nachichevan AR), Armenia, Georgia, Iran, Turkey (**new record**).

The new record from Turkey is as follows: ♂, Anatolien, Prov. Muş, Buğlan geçidi, 1600 m, 28.6.-4.7.1977, leg. Holzschuh & Ressler (TICB).

### **Sphenoptera (*Deudora*) curta** Jakovlev, 1885

*curta* Jakovlev, 1885: 131.

*caspic* Jakovlev, 1904: 184, **syn. n.**

*plavilscikovi* Obenberger, 1952: 18, **syn. n.**

*curta* var. *androssovi* Obenberger, 1929a: 30 (key), 126 (descr.) (unavailable name).

**Type material examined.** *S. curta* Jak., lectotype (designated here, ZIN): ♂, Ak-Dzhulpas [Kazakhstan] (h, rus)/ Type (p)/ *curta* m. 100 (h).

– *S. caspic* Jak., lectotype (designated here, ZIN): ♂, isl. Kisyukli [Turkmenistan], 23.IV.94 (h, rus)/ Vorontsov (h, rus)/ Type (p)/ *caspic* Jak., 1904 (h).

– *S. plavilscikovi* Obenb., lectotype (designated here, NMPC): ♀, Transcaspiya, Repetek [Turkmenistan], 30.V.1914, N. Plavilshnikov (p).

– *S. curta* var. *androssovi* Obenb., lectotype (designated here, NMPC): ♂, Farab [Turkmenistan], 25.V.1912, Androssov (h). Paralectotypes: 1 ♀, Transcaspiya, Repetek [Turkmenistan], 20.V.1911, Androssov (h); 1 ♀, Ashabad [Turkmenistan] (p)/ Ahnger (p).

**Remarks.** The comparison of type specimens of *S. curta* Jak., *S. caspic* Jak. and *S. plavilscikovi* Obenb., as well as of *S. curta* var. *androssovi* Obenb. and series from several localities has shown that they are conspecific.

**Note.** The type data of *S. curta* Jak. are as follows: Tourkestan [Turkestan town] – Ak-Djoul-

pass (W. Balassoglo). *S. curta* var. *androssovi* Obenb. is an infrasubspecific form according to Article 45.6.1 of ICZN.

**Distribution.** Kazakhstan, Tajikistan, Turkmenistan, Uzbekistan, Iran.

### **Sphenoptera (*Deudora*) afflicta** Jakovlev, 1900

*afflicta* Jakovlev, 1900: 401 (key), 406 (descr.).

**Type material examined.** *S. afflicta* Jak., lectotype (designated here, ZIN): ♂, Tashkent [Uzbekistan], 1888 (h, rus)/ *afflicta* n. sp. (h)/ *afflicta* Jak. (h).

**Distribution.** Kazakhstan, Turkmenistan, Uzbekistan.

### **Sphenoptera (*Deudora*) astuta** Jakovlev, 1898

*astuta* Jakovlev, 1898b: 549 (subgen. *Sphenoptera* s. str.); 1900: 402 (subgen. *Deudora*).

**Type material examined.** *S. astuta* Jak., lectotype (designated here, ZIN): ♂, Amasia [Turkey], Stdgr. (h)/ 706 (h)/ Type (p)/ *astuta* Jak., O (h)/ Amasia (p)/ *astuta* Jak. (p).

**Distribution.** The species is known from the type locality only.

### **Sphenoptera (*Deudora*) antilibanensis** Obenberger, 1952

*antilibanensis* Obenberger, 1952: 7.

*nikitaliae* Obenberger, 1952: 16, **syn. n.**

**Type material examined.** *S. antilibanensis* Obenb., lectotype (designated here, NMPC): ♀, Anti-Libanon, Zebdani, Syr. [Syria], Mai 31, Kluzer (p).

– *S. nikitaliae* Obenb., lectotype (designated here, NMPC): ♀, Turquie: Nikitalia (h).

**Remarks.** The comparison of type specimens of both species, including the ovipositor structure, has shown their conspecificity.

**Distribution.** Turkey, Syria.

### **Sphenoptera (*Deudora*) confinis** Jakovlev, 1893

*confinis* Jakovlev, 1893: 131.

**Type material examined.** *S. confinis* Jak., lectotype (designated here, ZIN): ♀, Syria, Staud. 75 (h)/ Type (p)/ *confinis* (h)/ *confinis* Jak. (h).

**Distribution.** The species is known from the type locality only.

### **Sphenoptera (*Deudora*) radicolica** Obenberger, 1929

*radicolica* Obenberger, 1929a: 22 (key), 1:8 (descr.).

**Type material examined.** *S. radicolica* Obenb., lectotype (designated here, NMPC): ♀, Syria (h).

**Distribution.** Syria.

***Sphenoptera* (*Deudora*) *idonea* Jakovlev, 1908***idonea* Jakovlev, 1908a: 223.

*Type material examined.* *S. idonea* Jak., lectotype (designated here, ZIN): ♀, Aintab [Turkey, Gaziantep] (p)/okolo [near, rus] *allecta* (h)/ *Type* (p)/ *idonea* (h).

*Distribution.* The species is known from the type locality only.

***Sphenoptera* (*Deudora*) *tenax* Jakovlev, 1902***tenax* Jakovlev, 1902: 563 (key), 577 (descr.), 583 (cat.).

*Type material examined.* *S. tenax* Jak., lectotype (designated here, ZIN): ♂, Caucasus, Araxesthal [Arax valley], Leder, Reitter (p)/ *Type* (p)/ *tenax* m. (h).

*Distribution.* Azerbaijan (Gyanja; Nachichevan AR: Ordubad).

***Sphenoptera* (*s. str.*) *arcana* Jakovlev, 1908***arcana* Jakovlev, 1908a: 211.*assuricola* Obenberger, 1920: 121 (subgen. *Deudora*), **syn. n.***baghdadensis* Obenberger, 1929b: 13 (subgen. *Deudora*), **syn. n.***morgani* Obenberger, 1929a: 18 (key), 114 (descr.) (part.) (subgen. *Deudora*).*stella* Obenberger, 1952: 5 (subgen. *Deudora*), **syn. n.***teheranica* Obenberger, 1952: 6 (subgen. *Deudora*), **syn. n.***assuricola heliochaera* Obenberger, 1929a: 17 (key, as ssp.), 111 (descr., as var.) (subgen. *Deudora*), **syn. n.**

*Type material examined.* *S. arcana* Jak., lectotype (designated here, ZIN): ♀, 29.IV.04, Zarudny (h, rus)/ Pers. sept. [Iran, Teheran Prov., Nesrabad (between Kāshān and Qom)] (h)/ *Type* (p)/ *arcana* (h).

– *S. assuricola* Obenb., lectotype (designated here, NMPC): ♀, Assur, Mesopot. [Iraq], Pietschmann' 10 (p)/ Mesopot. Exp., Nat. O. V., 1910 (p); paralectotypes (NMW): 2 specimens (sex unknown), Assur, Mesopot. [Iraq] (p)/ Pietschmann (p).

– *S. baghdadensis* Obenb., lectotype (designated here, NMPC): ♀, Bagdad [Iraq], Dr. Kalalova (p).

– *S. morgani* Obenb., 1 paralectotype, ♀: Museum Paris, Louristan, Le seine Merreh A Khoremabad [Iran] (alt. de 650 m a 1250 m), J. De Morgan, 1904 (p).

– *S. stella* Obenb., lectotype (designated here, NMPC): ♂, Iran mer. occ., Schiras, Taschteba, Ende April 38 (p).

– *S. teheranica* Obenb., lectotype (designated here, NMPC): ♂, Teheran, Persia [Iran], V. 1900 (h).

– *S. assuricola heliochaera* Obenb., holotype (NMPC): ♂, Mesopotam. cent. [Iraq] (h).

*Remarks.* The comparison of type specimens of above mentioned species has shown that they belong to the same species closely related to *S. antiqua* Ill., the type species of the genus *Sphenoptera*.

*Note.* *S. assuricola heliochaera* Obenb. was described initially in the key of *Deudora* as a subspecies; though Obenberger quoted it as "var." in the same paper, it has to be considered as having subspecific rank.

*Distribution.* Iran, Iraq.

***Sphenoptera* (*s. str.*) *antiqua* (Illiger, 1803)***antiqua* Illiger, 1803: 247 (*Buprestis*).*serena* Jakovlev, 1900: 401 (key), 407 (descr.) (subgen. *Deudora*), **syn. n.***euro* Obenberger, 1929a: 27 (key), 123 (descr.) (subgen. *Deudora*), **syn. n.**

*Type material examined.* *S. antiqua* (Ill.), lectotype (designation: Volkovitsh, Kalashian, 2002; MNB): (sex unknown), 11856 (p)/ Lusitanien [Portugal], Grf. v. Hoffmannsegg, 11856 (h)/ *Antiqua* Ill.\*, *luctuosa* Koy\* (h, bottom)/ *Type* (p, red)/ *antiqua* Ill., *Type!* (h), Det. Dr. Obenberger (p). Paralectotypes: 1 specimen (sex unknown), *luctuosa* Koy i. coll., Ungarn [Hungary], Koy leg., 11856 (h)/ *Type* (p, red)/ *antiqua* Ill., *Type!* (h), Det. Dr. Obenberger (p); 1 specimen (sex unknown), Lusitanien [Portugal], Grf. v. Hoffmannsegg, 11856 (h)/ Kerr.[emans] vid. (h)/ *Type* (p, red)/ *antiqua* Ill., *Type!* (h), Det. Dr. Obenberger (p).

– *S. serena* Jak., lectotype (designated here, ZIN): ♀, Smyrna [Turkey, Izmir] (h)/ *serena* Jak., *type* (h)/ *carceli* Cast. et Gory (h)/ *Type* (p).

– *S. euro* Obenb., lectotype (designated here, NMPC): ♀, Akbes, S.[yria] [Turkey] (h).

*Remarks.* The type species of the genus *Sphenoptera*, *S. antiqua* Ill., is one of the most widely distributed and variable species of the genus, repeatedly described from different localities of its extensive range. The synonymy of this species will be the subject of a separate work; here we are quoting only the synonymy of species originally described as *Deudora* based on examination of type materials.

*Distribution.* Southern, Central and Eastern Europe, including the southern part of European Russia, ?Sweden, Caucasus and Transcaucasia, Iran, Iraq, Turkey, Algeria, Morocco.

***Sphenoptera* (*s. str.*) *hypocrita* Mannerheim, 1837***hypocrita* Mannerheim, 1837: 92.*siewersi* Jakovlev, 1887: 82 (Syn.: Jakovlev, 1908b: 256).*glabricollis* Obenberger, 1929a: 33 (key), 129 (descr.) (subgen. *Deudora*), **syn. n.**

*Type material examined.* *S. hypocrita* Mnnh., lectotype (designated here, ZMH): Menetr. (h)/ Caucasus (h)/ 120 (p).

– *S. siewersi* Jak., lectotype (designated here, ZIN): ♂, Tiflis [Georgia, Tbilisi], 27 Mai 1880 (h)/ *siewersi* Jak. (h).

– *S. glabricollis* Obenb., lectotype (designated here, NMPC): ♂, Asia Minor, Eski-Chechir [Turkey], v. Bode-meyer. (p)/ *Sphenoptera hypocrita* Mann. (*Diabola* Ob.) (*glabricollis* Ob.), det. M. Niehuis, 1998 (p); 1 paralectotype, NMPC, ♂, the same data.

*Remarks.* Obenberger repeatedly described this species under different names and placed them in different subgenera. Species described in the subgenus *Sphenoptera* s. str. will be the subject of a separate paper. The examination of types of *S. glabricollis* Obenb. has shown that they are conspecific with *S. hypocrita* Mnnh. and belong to the subgenus *Sphenoptera* s. str.

*Note.* There is a specimen labelled "Dr. Gebhardt (p) Astrakan (h)" in TMB collection, this label is undoubtedly erroneous.

*Distribution.* Jordan, Turkey, Azerbaijan, Armenia, Georgia, Iran, Turkmenistan, Pakistan.

### **Sphenoptera (s. str.) varia** Jakovlev, 1887

*varia* Jakovlev, 1887: 83.

*cuprea*: Kraatz, 1882: 216 (misidentification; non Ballion, 1878).

*samarkanda* Obenberger, 1929a: 29 (key), 124 (descr.) (subgen. *Deudora*), **syn. n.**

*Type material examined.* *S. varia* Jak., lectotype (designated here, ZIN): ♀, [violet square]/ Samarkand [Uzbekistan], Staud. 50 (h)/ 893 (h)/ *varia* (h).

– *S. samarkanda* Obenb., lectotype (designated here, NMPC): ♀, Samarkand [Uzbekistan] (h)/ Inv. 26 284/ *Sphenoptera varia* Jak. (h), Alexeev det. (p).

*Remarks.* Under the name "*S. cuprea* Ballion", Kraatz described a species quite different from that of Ballion (1878) [= *S. (Chrysoblemma) orichalcea* (Pall.), Volkovitch & Kalashian, 2003]. Jakovlev found out this fact and described a new species based on a specimen from Kraatz's collection (♂) and a specimen received from Staudinger (♀). The first one is absent in all the collections examined, so we designate as lectotype the specimen from ZIN. The Staudinger's specimen is undoubtedly conspecific with the type of *S. samarkanda* Obenb. originally described in the subgenus *Deudora*.

*Distribution.* The species is known from the type locality only (Uzbekistan: Samarkand).

### **Sphenoptera (s. str.) donata** Obenberger, 1929

*donata* Obenberger, 1929a: 30 (key), 125 (descr.) (subgen. *Deudora*).

*Type material examined.* *S. donata* Obenb., lectotype (designated here, NMPC): ♀, Akbes, Syria [Turkey] (h).

*Remarks.* This species, closely related to *S. hypocrita* Mnnh. and *S. varia* Jak., is transferred to the subgenus *Sphenoptera* s. str.

*Distribution.* The species is known from the type locality only.

### **Sphenoptera (s. str.) demissa** Marseul, 1865

*demissa* Marseul, 1865: 365.

*breiti* Obenberger, 1920: 117 (subgen. *Deudora*), **syn. n.**

*Type material examined.* *S. demissa* Mars., lectotype (designated here, MNHN): ♀, Caucase (h)/ *modesta* Cauc., ♀ (h, blue)/ ex Musaeo Mniszech (p).

– *S. breiti* Obenb., lectotype (designated here, NMPC): ♂, Mesopotamia, Mosul [Iraq], Coll. Hauser, 5.09 (p); 2 paralectotypes, ♂, the same data.

*Remarks.* This species is very variable in the body size, shape, coloration and structure of sur-

face, that is why it was repeatedly described by different authors (see remarks for *S. hypocrita* Mnnh.). The examination of the type specimen of *S. (D.) breiti* has shown that it belongs to the subgenus *Sphenoptera* s. str. and is conspecific with *S. demissa* Mars.

*Distribution.* Armenia, Turkey, Iran, Iraq, Afghanistan, Turkmenistan.

### **Sphenoptera (s. str.) pilipes** Jakovlev, 1886

*pilipes* Jakovlev, 1886: 92.

*anchorifera* Obenberger, 1952: 20 (subgen. *Deudora*), **syn. n.**

*Type material examined.* *S. pilipes* Jak., lectotype (designated here, ZIN): ♂, Naryn [Kyrgyzstan] (h, rus)/ ♂ (p)/ *pilipes* m. (h); 4 paralectotypes, ♀, the same data.

– *S. anchorifera* Obenb., lectotype (designated here, NMPC): ♂, Turkestan (h).

*Remarks.* The examination of the type specimen of *S. anchorifera* Obenb., originally described in the subgenus *Deudora*, has shown that it belongs to the subgenus *Sphenoptera* s. str. and is conspecific with *S. pilipes* Jak.

*Distribution.* Kazakhstan, Kyrgyzstan.

### **Sphenoptera (s. str.) subtricrostata** Kraatz, 1882

*subtricrostata* Kraatz, 1882: 318; Jakovlev, 1898a: 330; 1902: 582 (subgen. *Deudora*); Obenberger, 1929a: 248 (subgen. *Deudora*).

*Type material examined.* *S. subtricrostata* Kr., ?holotype (NMPC): ♀, Samarkand [Uzbekistan] (h)/ Type [Obenberger's standard]/ *subtricrostata* Kr. (h), Dr. Obenberger det. (p, with red mark in the corner).

*Remarks.* This species is closely related to *S. chalybaea* Ménétrés (1848) from *Sphenoptera* s. str. and must be transferred to this subgenus.

*Note.* The type specimen of *S. subtricrostata* Kr. in Obenberger's collection (NMPC) originated, supposedly, from Kraatz's collection (see *S. aeneomicans* Kr., notes).

*Distribution.* Kazakhstan, Tajikistan, Uzbekistan.

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