

**Review of the genus *Asiomira* (Dubrovina, 1973) stat. nov.  
(Coleoptera: Tenebrionidae: Alleculinae: Gonoderini)**

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**Taxonomy, description, redescription, new status, new subgenus, new species, new combinations, key, Coleoptera, Tenebrionidae, Alleculinae, *Asiomira*, *Mucheimira*, Palaearctic Region**

**Abstract.** A new genus *Asiomira* (Dubrovina, 1973) stat. nov. is redescribed and raised from the level of subgenus. Species from Iran, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan are transferred from the genus *Isomira* Mulsant, 1856 to the genus *Asiomira* (Dubrovina, 1973) stat. nov. as *Asiomira firjusana* (Dubrovina, 1973) comb. nov., *Asiomira kabadiana* (Dubrovina, 1973) comb. nov., *Asiomira keleinikovae* (Dubrovina, 1973) comb. nov., *Asiomira ophthalmica* (Seidlitz, 1896) comb. nov. as type species and *Asiomira rufescens* (Dubrovina, 1982) comb. nov. A new subgenus *Mucheimira* subgen. nov. of the genus *Isomira* Mulsant, 1856 is established for the species *Isomira stoetzneri* Muche, 1981 as a type species, *Isomira bicolorata* Muche, 1982, *Isomira eustrophoides* Pic, 1930, *Isomira farkaci* Novák, 2014, *Isomira martensi* Novák, 2014, *Isomira murzini* Novák, 2009, *Isomira nepalica* Novák, 2009, *Isomira schawalleri* Novák, 2014, *Isomira sichuanica* Novák, 2009 and *Isomira zhongdianica* Novák, 2014. A new species *Asiomira kadleci* sp. nov. is described, illustrated and keyed with other *Asiomira* species.

## INTRODUCTION

The genus *Isomira* Mulsant, 1856 was established by Mulsant (1856) with the type species *Cistela antennata* Panzer, 1796. Borchmann (1910) knew 51 species worldwide, Mader (1928) 35 species from the Palaearctic Region, all in subgenus *Isomira* s. str. Hölzel (1958) recognized a new subgenus *Heteromira* Hölzel, 1958 with the type species *Isomira moroi* Hölzel, 1958. Dubrovina (1973) established a further new subgenus *Asiomira* Dubrovina, 1973 with the type species *Isomira ophthalmica* Seidlitz, 1896. Weise (1974) added further two subgenera *Apteromira* Weise, 1974 with the type species *Cistela ovulum* (Kiesenwetter, 1863) and *Danielomira* Weise, 1974 with the type species *Isomira cantabrica* Weise, 1974. Finally Dubrovina (1982) described a new subgenus *Paraisomira* Dubrovina, 1982 with the type species *Cistela oculata* Marseul, 1876. Novák & Pettersson (2008) listed in six subgenera 73 species, a new species was described by Soldati & Lemaire (2010) as *Isomira aliquoi* Soldati et Lemaire, 2010 from Cyprus; from China and Nepal Novák (2009 and 2014) described further eight species as *Isomira farkaci* Novák, 2014, *Isomira martensi* Novák, 2014, *Isomira murzini* Novák, 2009, *Isomira nepalica* Novák, 2009, *Isomira schawalleri* Novák, 2014, *Isomira sichuanica* Novák, 2009 and *Isomira zhongdianica* Novák, 2014. These species as well as the species *Isomira eustrophoides* Pic, 1930 and *Isomira stoetzneri* Muche, 1981 from China and *Isomira bicolorata* Muche, 1982 from Saudi Arabia are very different from the species *Isomira ophthalmica* Seidlitz, 1896, *Isomira firjusana* Dubrovina, 1973, *Isomira kabadiana* Dubrovina, 1973, *Isomira keleinikovae* Dubrovina, 1973 and *Isomira rufescens* Dubrovina, 1982 from Iran, Kyrgyzstan, Tajikistan,

Turkmenistan and Uzbekistan, but all together were included into the subgenus *Asiomira*. It is necessary to raise the subgenus *Asiomira* Dubrovina, 1973 up to the generic level and introduce new combinations for the species *Asiomira ophthalmica* (Seidlitz, 1896) comb. nov. as type species, *Asiomira firjusana* (Dubrovina, 1973) comb. nov., *Asiomira kabadiana* (Dubrovina, 1973) comb. nov., *Asiomira keleinikovae* (Dubrovina, 1973) comb. nov. and *Asiomira rufescens* (Dubrovina, 1982) comb. nov. The species of new genus are somewhere between *Isomira* and *Pseudocistela* species. They differ from *Isomira* species mainly by not oval shape of body, antennomeres more serrate and by differences between OI of males and females. They are different from species of the subgenus *Mucheimira* subgen. nov. mainly by not oval shape of body and antennomere 3 of male distinctly longer than antennomere 2; while the species of *Mucheimira* have body oval or elongate oval and antennomere 3 approximately as long as antennomere 2. The species of *Asiomira* differ from similar species of *Kralia* Novák, 2013 and *Paraisomira* Dubrovina, 1982 mainly by elytra without distinct rows of punctures in elytral striae and short ultimate palpomere; while *Kralia* and *Paraisomira* species have distinct rows of punctures in elytral striae and long and narrow ultimate palpomere. The species of *Asiomira* differ from the species of *Pseudocistela* Crotch, 1873 mainly by pronotum almost semicircular, lateral margins of pronotum arcuate, antennomeres less serrate, elytral striae indistinct and ultimate palpomere knife-shaped; while species of *Pseudocistela* have pronotum narrow, conically narrowing from base to apex, antennomeres strongly serrate, elytral striae distinct and ultimate palpomere triangular.

It is also necessary to establish *Mucheimira* as a new subgenus of the genus *Isomira* for the species *Isomira (Mucheimira) bicolorata* Muehe, 1982, *Isomira (Mucheimira) eustrophoides* Pic, 1930, *Isomira (Mucheimira) farkaci* Novák, 2014, *Isomira (Mucheimira) martensi* Novák, 2014, *Isomira (Mucheimira) murzini* Novák, 2009, *Isomira (Mucheimira) nepalica* Novák, 2009, *Isomira (Mucheimira) schawalleri* Novák, 2014, *Isomira (Mucheimira) sichuanica* Novák, 2009), *Isomira (Mucheimira) zhongdianica* Novák, 2014 and *Isomira (Mucheimira) stoetzneri* Muehe, 1981 as the type species.

The genus *Asiomira* Dubrovina, 1973 stat. nov. is redescribed, and a new subgenus *Mucheimira* subgen. nov. is described.

A new species is described and illustrated as *Asiomira kadleci* sp. nov. from Tajikistan (Javroz Mts.). The new species is keyed with other *Asiomira* species.

## MATERIAL AND METHODS

Two important morphometric characteristics used for the descriptions of the species of the subfamily Alleculinae, the ‘ocular index’ dorsally (Campbell & Marshall 1964) is calculated by measuring the minimum distance between the eyes and dividing this value by the maximum dorsal width across eyes, the quotient resulting from this division is converted into an index by multiplying by 100 and ‘pronotal index’ (Campbell 1965) expresses the ratio of the length of the pronotum along the midline to the width at the basal angles, this ratio is multiplied by 100 for convenience in handling, are used in this paper as well.

The following codens are used in the paper:

ERMI private collection of Enrico Ruzier, Mizano, Italy;

NMBS Naturhistorisches Museum Basel, Switzerland;

NMPC National Museum, Praha, Czech Republic;

VNPC private collection of Vladimír Novák, Praha, Czech Republic.

Measurements were made with Olympus SZ 40 stereoscopic microscope with continuous magnification and with Soft Imaging System AnalySIS. Measurements of body parts and corresponding abbreviations used in text are as follows:

AL - total antennae length; BL - maximum body length; EL - maximum elytral length; EW - maximum elytral width; HL - maximum length of head (visible part); HW - maximum width of head; OI - ocular index dorsally; PI - pronotal index dorsally; PL - maximum pronotal length; PW - pronotal width at base; RLA - ratios of relative lengths of antennomeres 1-11 from base to apex ( $3=1.00$ ); RL/WA - ratios of length / maximum width of antennomeres 1-11 from base to apex; RLT - ratios of relative lengths of tarsomeres 1-5 respectively 1-4 from base to apex ( $1=1.00$ ).

Other abbreviations used in the text:  
yl (yellow label); hb (handwritten black).

Moreover, a double slash (//) separates data on different labels and a slash (/) data in different lines.

## TAXONOMY

### REDESCRIPTION OF THE GENUS *ASIOMIRA* (DUBROVINA) STAT. NOV.

*Isomira* subgenus *Asiomira* Dubrovina, 1973: 367 type species *Isomira ophthalmica* Seidlitz, 1896.  
= *Kirgisomira* Weise, 1974: 71 type species *Isomira ophthalmica* Seidlitz, 1896.

**Type species:** *Isomira ophthalmica* Seidlitz, 1896: 107.

**Redescription.** Habitus (Figs. 1-3, 8, 13) more elongate, not oval, widest near two thirds of elytral length from base to apex. Dorsal surface slightly shiny or matte, with dense punctuation, microgranulation and setation. Head (Figs. 5 and 9) relatively wide, with dense punctuation, microgranulation and setation. Eyes very large, transverse, distinctly excised, space between eyes narrow; distinctly narrower than diameter of one eye, distinctly wider than length of antennomere 2. Antennae (Figs. 6 and 10) relatively long, with setation, exceeding half body length. Antennomeres 1-3 slightly shiny, paler than matter antennomeres 4-11. Antennomeres 4-11 with fine microgranulation and punctuation. Antennomeres 4-10 distinctly serrate. Antennomere 2 shortest, antennomere 3 nearly twice longer than antennomere 2. Maxillary palpus with pale setation and microgranulation. Palpomeres 2, 3 distinctly narrowest in base and broadest in apex. Ultimate palpomere relatively short, closely axe-shaped. Pronotum (Figs. 5 and 9) nearly semicircular, dorsal surface with microgranulation, dense punctuation and setation. Lateral margins arcuate, posterior angles distinct, anterior angles indistinct, rounded. Elytron widest near two thirds elytral length, dorsal surface with relatively long and dense setation, microgranulation and dense punctuation. Elytral striae and elytral interspaces indistinct. Scutellum triangular with microgranulation, punctures and setae. Legs narrow and long, with dense setation. Tibia very

slightly widened to apex. Penultimate tarsomere of each tarsus not widened and without membranous lobes. Aedeagus as in Figs. 6, 7, 11, 12, 14 and 15.

**Female.** Body wider and more robust, space between eyes wider. Antennae shorter, antennomere 3 longer than those in male.

**Differential diagnosis.** (See the key). Species of the genus *Asiomira* stat. nov. differ from species of genus *Isomira* mainly by not oval shape of body, by antennomeres more serrate and by distinct differences between OI of males and females; while *Isomira* species have oval shape of body, antennomeres more filiform and small differences between OI of males and females. Species of *Asiomira* are different from species of the subgenus *Mucheimira* subgen. nov. mainly by not oval shape of body and antennomere 3 of male distinctly longer than antennomere 2; while the species of *Mucheimira* have body oval or elongate oval and antennomere 3 approximately as long as antennomere 2. The species of *Asiomira* differ from the similar species of *Kralia* Novák, 2013 and *Paraisomira* Dubrovina, 1982 mainly by elytra without distinct rows of punctures in elytral striae and short ultimate palpomere; while *Kralia* and *Paraisomira* species have distinct rows of punctures in elytral striae and long and narrow ultimate palpomere. The species of *Asiomira* differ from the species of *Pseudocistela* Crotch, 1873 mainly by pronotum almost semicircular, lateral margins of pronotum arcuate, antennomeres less serrate, elytral striae indistinct and ultimate palpomere closely knife-shaped; while species of *Pseudocistela* have pronotum narrow, conically narrowing from base to apex, antennomeres strongly serrate, elytral striae distinct and ultimate palpomere more triangular.

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

#### KEY TO THE MALE SPECIES OF THE GENUS *ASIOMIRA*

- A (B) Space between eyes of male broad, approximately as wide as in females. .... genus *Isomira* Mulsant, 1856  
 B (A) Space between eyes of male narrow, distinctly narrower than in female. .... C  
 C (D) Body oval or elongate oval, antennomere 3 of male approximately as long as or shorter than antennomere 2, antennae less serrate, narrow. ....  
     genus *Kralia* Novák, 2013; subgenus *Mucheimira* subgenus nov.; subgenus *Paraisomira* Dubrovina, 1982  
 D (C) Body not oval, elytra distinctly widened to apex, antennomere 3 of male distinctly longer than antennomere 2, antennae more serrate. .... E  
 E (G) Pronotum narrow, conically narrowing from base to apex, antennomeres strongly serrate, elytral striae distinct, ultimate palpomere triangular. .... Genus *Pseudocistela* Crotch, 1873  
 G (E) Pronotum almost semicircular, on lateral margins arcuate, antennomeres less serrate, elytral striae indistinct, ultimate palpomere closely knife-shaped. .... Genus *Asiomira* (Dubrovina, 1973) stat. nov. .... 1  
 1 (2) Each of antennomeres 4-7 wider and shorter, less than 2.5 times as long as wide. .... 3  
 2 (1) Each of antennomeres 4-7 narrower and longer, more than 2.5 times as long as wide. .... 5  
 3 (4) Posterior angles of pronotum almost rectangular, punctures of pronotum approximately as large as punctures of elytra. Habitus as in Fig. 8, head and pronotum (Fig. 9), antenna (Fig. 10), aedeagus (Figs. 11, 12). Iran, Kyrgyzstan, Turkmenistan, Uzbekistan. .... *Asiomira ophthalmica* (Seidlitz, 1896) comb. nov.  
 4 (3) Posterior angles of pronotum widely arcuate, punctures of pronotum shallower than those of elytra. Habitus as in Fig. 1. Tajikistan, Turkmenistan. .... *Asiomira firjusana* (Dubrovina, 1973) comb. nov.  
 5 (6) Dorsal surface of body with dense setation, pronotum approximately twice as wide as long. .... 7  
 6 (5) Dorsal surface of body with sparser setation, pronotum less than two times as wide as long. .... 9

- 7 (8) Pronotum longer, anterior margin of pronotum rounded. Tajikistan. .... *Asiomira keleinikovae* (Dubrovina, 1973) comb. nov.
- 8 (7) Pronotum shorter, anterior margin of pronotum against head straight. Habitus as in Fig. 3, head and pronotum (Fig. 4), antenna (Fig. 5), aedeagus (Figs. 6, 7). Tajikistan. .... *Asiomira kadleci* sp. nov.
- 9 (10) Body pale brown, elytra with pale setation, antennomere 3 approximately two times longer than antennomere 2; each of antennomeres 4-6 more than 1.75 times longer than antennomere 3. Habitus as in Fig. 13, aedeagus (Figs. 14, 15). Tajikistan. .... *Asiomira rufescens* (Dubrovina, 1982) comb. nov.
- 10 (9) Body dark reddish brown, elytra with dark setation, antennomere 3 approximately three times longer than antennomere 2; each of antennomeres 4-6 less than 1.65 times as long as antennomere 3. Habitus as in Fig. 2. Tajikistan. .... *Asiomira kabadiana* (Dubrovina, 1973) comb. nov.

***Asiomira firjusana* (Dubrovina, 1973) comb. nov.**  
(Fig. 1)

*Isomira* (*Asiomira*) *firjusana* Dubrovina, 1973: 371.

**Material examined.** (4 ♂♂): TADZHIKISTAN, Varzob distr., / Varzob, Campus 'Chaika', / 1110m, 38°46'23.90''N, / 68°49'03.89''E, 06.VII 2012. / A.Barševskis leg., (ERMI, VNPC).

**Remark.** Habitus of male as in Fig. 1. Figures of body parts see Dubrovina (1973: 369, 374), pronotum (Fig. 3), antenna (Fig. 7), anterior tarsi (Fig. 11), aedeagus (Fig. 24).

Measurements of body parts (one male): BL 8.22 mm; HL 1.17 mm; HW 1.54; OI equal to 22.06; PL 1.24 mm; PW 2.40 mm; PI equal to 51.66; EL 5.81 mm; EW 3.53 mm; AL 4.87 mm; AL/BL 0.59.

RLA (1-11): 0.98 : 0.54 : 1.00 : 1.68 : 1.70 : 2.11 : 2.45 : 2.23 : 2.21 : 2.18 : 2.09.

RL/WA (1-11): 1.72 : 1.07 : 1.70 : 2.19 : 2.12 : 2.48 : 2.48 : 3.05 : 3.65 : 4.52 : 5.32.

RLT: 1.00 : 0.45 : 0.40 : 0.31 : 1.10 (protarsus); 1.00 : 0.34 : 0.30 : 0.25 : 0.70 (mesotarsus); 1.00 : 0.39 : 0.25 : 0.48 (metatarsus).



Fig. 1: *Asiomira firjusana* (Dubrovina, 1973) comb. nov.: 1- habitus of male.

**Distribution.** Tajikistan, Turkmenistan.

***Asiomira kabadiana* (Dubrovina, 1973) comb. nov.**  
(Fig. 2)

*Isomira* (*Asiomira*) *kabadiana* Dubrovina, 1973: 372.

**Material examined.** (1 ♂): Tigrovaja Balka / 2-6.6 1966 Král / Tadzhikistan m. // *Isomira* (*Asiomira*) / *kabadiana* Dubr. / opr. / M. Dubrovina [hb], (VNPC); (1 ♀): Tigrovaja Balka / 2-6.6 1966 Král / Tadzhikistan m., (VNPC).

**Remark.** Habitus of male as in Fig. 2. Figures of body parts see Dubrovina (1973: 369, 374),

pronotum (Fig. 4), antenna (Fig. 8), anterior tarsi (Fig. 12), aedeagus (Fig. 25).

Measurements of body parts (male): BL 8.06 mm; HL 1.19 mm; HW 1.45; OI equal to 19.38; PL 1.25 mm; PW 2.26 mm; PI equal to 55.42; EL 5.62 mm; EW 3.01 mm.

RLA (1-8): 0.82 : 0.38 : 1.00 : 1.62 : 1.54 : 1.65 : 1.79 : 1.93.

RL/WA (1-8): 1.75 : 0.90 : 2.72 : 3.44 : 2.76 : 2.44 : 3.05 : 2.98.

RLT: 1.00 : 0.56 : 0.41 : 0.37 : 1.12 (protarsus); 1.00 : 0.47 : 0.40 : 0.23 : 0.84 (mesotarsus); 1.00 : 0.40 : 0.25 : 0.63 (metatarsus).

**Distribution.** Tajikistan.



Fig. 2: *Asiomira kabadiana* (Dubrovina, 1973) comb. nov.: habitus of male.

***Asiomira kadleci* sp. nov.**  
(Figs. 3-7)

**Type locality.** Tajikistan, Javroz Mts.

**Type material.** Holotype (♂): JAVROZ 28.VI. / O. Odv. 84 // ex coll. S. Kadlec / National Museum / Prague, Czech Republic, (NMPC). Paratypes: (4 ♂♂ 1 ♀): same data as holotype, (NMPC, VNPC); (1 ♂): USSR, Tardzjekistan 1984 / Hissar Mts. 1.300-1.500 m. / 50 km NEE DUSHANBE 28.6. / YAVROZ, Kafirigan river / Vít Kubáň leg. // yl: Freiwilliger / Museumsverein / Basel 1987, (NMBS). The types are provided with a printed red label: 'Asiomira kadleci sp. nov. HOLOTYPUS [or PARATYPUS] V. Novák det. 2015'.

**Description of holotype.** Habitus as in Fig. 3, body more elongate, from pale reddish brown to dark brown, slightly shiny, dorsal surface setaceous, BL 8.38 mm. Widest near two thirds elytral length from base to apex; BL/EW 2.69.

Head (Fig. 4). Posterior part dark brown, anterior part reddish brown, clypeus pale brown. Dorsal surface with relatively long, pale brown setation, slightly shiny, with dense punctuation, punctures coarse, medium-sized. HW 1.52 mm; HW/PW 0.58; HL (visible part) 1.28 mm. Eyes very large, transverse, distinctly excised, space between eyes narrow; distinctly narrower than diameter of one eye, very slightly wider than length of antennomere 3, distinctly wider than length of antennomere 2; OI equals to 22.76.

Antennae (Fig. 5). Long, with pale brown setation, AL 5.38 mm; AL/BL 0.64. Antennomeres 1-3 pale brown, slightly shiny, antennomeres 4-11 matter, with fine

microgranulation and punctuation, antennomeres 4-10 distinctly serrate. Antennomere 2 shortest, antennomere 3 nearly twice longer than antennomere 2.

RLA (1-11): 0.83 : 0.61 : 1.00 : 1.64 : 1.79 : 1.85 : 1.94 : 1.99 : 2.02 : 2.05 : 2.27.

RL/WA (1-11): 1.45 : 1.60 : 1.94 : 2.58 : 2.70 : 2.68 : 2.89 : 2.91 : 3.33 : 3.55 : 3.95.

Maxillary palpus. Pale brown with pale brown setation and microgranulation. Palpomeres 2, 3 distinctly narrowest at base and broadest at apex with a few long pale brown setae. Ultimate palpomere closely axe-shaped.

Pronotum (Fig. 4). Reddish brown, semicircular, dorsal surface with microgranulation, dense punctuation and pale setation. PL 1.28 mm; PW 2.64 mm; PI equal to 48.45. Border lines complete, only in middle of anterior margin indistinct, lateral margins rounded, base finely bisinuate. Posterior angles distinct, roundly rectangular, anterior angles indistinct, rounded.

Ventral side of body. Pale reddish brown, slightly shiny with pale setation and punctuation. Abdomen pale brown with dark and pale setation, small, shallow punctures and microgranulation.

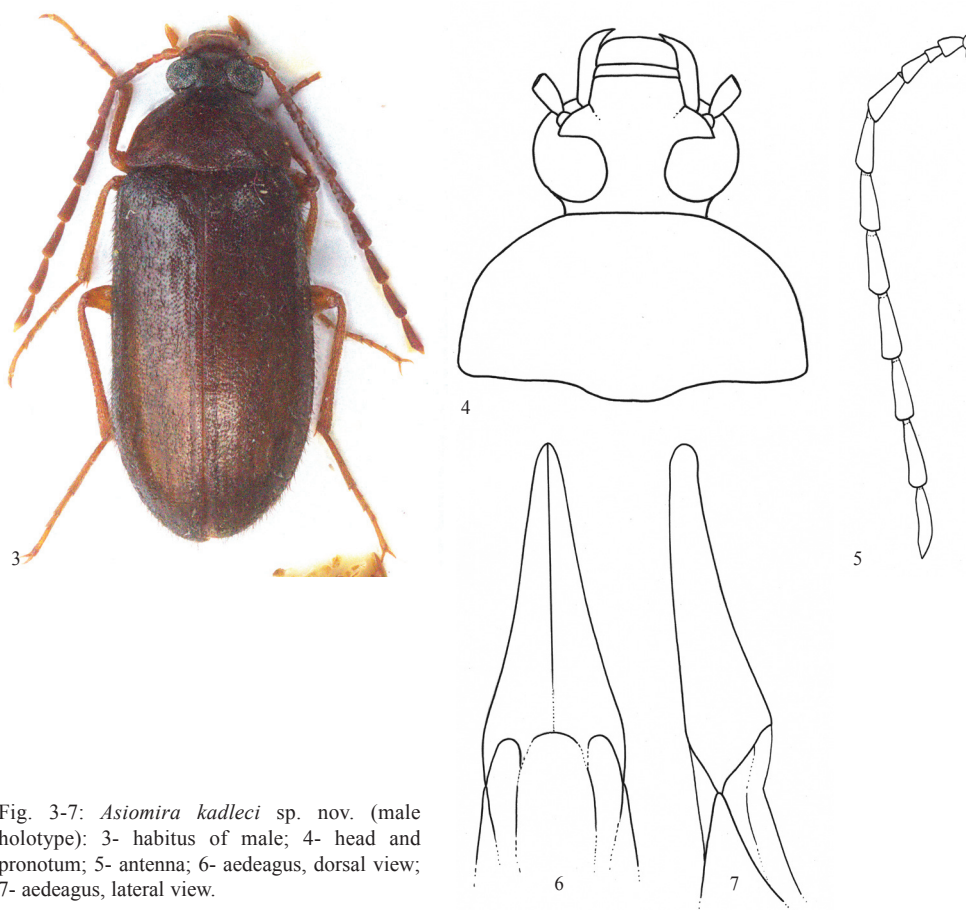


Fig. 3-7: *Asiomira kadleci* sp. nov. (male holotype): 3- habitus of male; 4- head and pronotum; 5- antenna; 6- aedeagus, dorsal view; 7- aedeagus, lateral view.

Elytron. Brown, distinctly darker than pronotum, widest near two thirds elytral length, dorsal surface with dense and long, pale setation, microgranulation and dense punctuation, slightly shiny. EL 5.82 mm; EW 3.11 mm; EL/EW 1.87. Elytral striae and elytral interspaces indistinct.

Scutellum. Reddish brown, distinctly paler than elytron itself, shiny, with microgranulation, punctures and long, pale setae.

Elytral epipleura. Brown, shiny, with sparse setation, broadest near base, slightly narrowing to ventrite 1, then parallel.

Legs. Pale reddish brown, narrow and long, with dense, golden yellow setation. Tibia very slightly widened to apex. Penultimate tarsomere of each tarsus not widened and without membranous lobes. RLT: 1.00 : 0.50 : 0.41 : 0.30 : 1.02 (protarsus); 1.00 : 0.45 : 0.39 : 0.26 : 0.81 (mesotarsus); 1.00 : 0.39 : 0.19 : 0.50 (metatarsus).

Both anterior tarsal claws with 5 visible teeth.

Aedeagus (Figs. 6-7). Small, ochre yellow. Basal piece slightly rounded laterally and slightly narrowing dorsally. Apical piece elongate triangular dorsally and beak-shaped dorsally and laterally. Ratio of length of apical piece to length of basal piece 1: 1.62.

**Female.** Wider and more robust, antennae shorter than in male (reaching only 0.42 of body length). Space between eyes wider than in male. Anterior tarsal claws with 4 visible teeth. Measurements of body parts: BL 9.44 mm; HL 1.23 mm; HW 1.63 mm; OI equal to 43.30; PL 1.50 mm; PW 3.19 mm; PI equal to 47.00; EL 6.71 mm; EW 3.96 mm; AL 3.99 mm; AL/BL 0.42.

RLA (1-11): 0.77 : 0.45 : 1.00 : 1.00 : 0.82 : 1.08 : 1.21 : 1.37 : 1.27 : 1.17 : 1.14.

RL/WA (1-11): 1.58 : 1.35 : 3.25 : 2.79 : 2.06 : 1.64 : 2.29 : 2.55 : 2.48 : 2.76 : 3.30.

RLT: 1.00 : 0.50 : 0.38 : 0.29 : 1.02 (protarsus); 1.00 : 0.44 : 0.29 : 0.26 : 0.74 (mesotarsus); 1.00 : 0.41 : 0.22 : 0.68 (metatarsus).

**Variability.** The type specimens somewhat vary in size; each character is given as its mean value, with full range in parentheses. Males (n=6). BL 8.22 mm (7.68-8.40 mm); HL 1.28 mm (1.24-1.31 mm); HW 1.51 mm (1.43-1.55 mm); OI 24.44 (21.60-28.00); PL 1.27 mm (1.13-1.34 mm); PW 2.51 mm (2.18-2.64 mm); PI 50.19 (48.45-51.60); EL 5.67 mm (5.28-5.83 mm); EW 3.19 mm (3.06-3.33 mm).

**Differential diagnosis.** (For details see the key above). *Asiomira kadleci* sp. nov. distinctly differs from the species *Asiomira ophthalmica* (Seidlitz, 1896) and *Asiomira firjusana* (Dubrovina, 1973) mainly by antennomeres 4-7 narrower and longer (more than 2.5 times longer than wide); while *A. ophthalmica* and *A. firjusana* have antennomeres 4-7 wider and shorter (less than 2.5 times longer than wide). *A. kadleci* is clearly different from similar species *Asiomira kabadiana* (Dubrovina, 1973) and *Asiomira rufescens* (Dubrovina, 1982) mainly by dorsal surface covered by dense setation and pronotum approximately two times as wide as long; while *A. kabadiana* and *A. rufescens* have sparser setation of dorsal surface and pronotum distinctly less than twice as wide as long. *A. kadleci* differs from similar species *Asiomira keleinikovae* (Dubrovina, 1973) mainly by shorter pronotum and anterior margin of pronotum against head straight; while *A. keleinikovae* has pronotum longer and anterior margin of pronotum arcuate.



**Name derivation.** In honour Stanislav Kadlec (†) - expert in Cerambycidae, because the type specimens are taken from his collection in NMPC.

**Distribution.** Tajikistan.

***Asiomira keleinikovae* (Dubrovina, 1973) comb. nov.**

*Isomira* (*Asiomira*) *keleinikovae* Dubrovina, 1973: 373.

**Remark.** Figures see Dubrovina (1973: 369, 374), pronotum (Fig. 3), antenna (Fig. 7), anterior tarsi (Fig. 11), aedeagus (Fig. 24).

**Distribution.** Tajikistan.

***Isomira muchei* Dubrovina, 1982**

*Isomira muchei* Dubrovina, 1982: 133.  
= *monticola* Muche, 1972: 127.

**Remark.** Muche (1972) described the species *Isomira monticola* Muche, 1972; the same name used Casey (1891) for *Isomira* species from California. For this reason, Dubrovina (1982) named this species as *Isomira muchei* Dubrovina, 1982; from this work it is also clear that the species is a member of the subgenus *Isomira* s. str.

**Distribution.** Georgia, South European Territory of Russia.

***Asiomira ophthalmica* (Seidlitz, 1896) comb. nov.**  
(Figs. 8-12)

*Isomira ophthalmica* Seidlitz, 1896: 107.

**Material examined.** (1 ♂ [specimen for redescription]): IRAN – Lorestan prov. / 10 km SW DORUD, 1431 m / N 33°26', E 49°00', / S. Kadlec leg. 9.vii.2004, (VNPC). (1 ♂): IRAN – Lorestan prov. / 25 km NWW DORUD / N 33°33', E 48°53', 1874 m / S. Kadlec leg. 8.vii.2004, (NMPC); (1 ♂): same data as penultimate, but P. Kabátek lgt., (VNPC).

**Redescription.** Habitus as in Fig. 8, body relatively wide, from pale brown to dark brown, matte, dorsal surface setaceous, BL 8.19 mm. Widest near two thirds elytral length from base to apex; BL/EW 2.39. Head (as in Fig. 9). Posterior part dark brown, anterior part distinctly paler, clypeus pale brown. HW 1.50 mm; HW/PW 0.58; HL (visible part) 1.28 mm. Dorsal surface with pale setation, with dense punctuation, interspaces between punctures narrow and slightly shiny with microgranulation, punctures coarse. Eyes very large, transverse, distinctly excised, space between eyes narrow, approximately as wide as or very slightly narrower than diameter of one eye; distinctly wider than length of antennomere 3; OI equal to 31.82. Antenna (as in Fig. 10) long, with short setation, AL 5.24 mm; AL/BL 0.64. Antennomeres 1-3 and apex of antennomere 11 pale brown, antennomeres 1-3 slightly shiny,

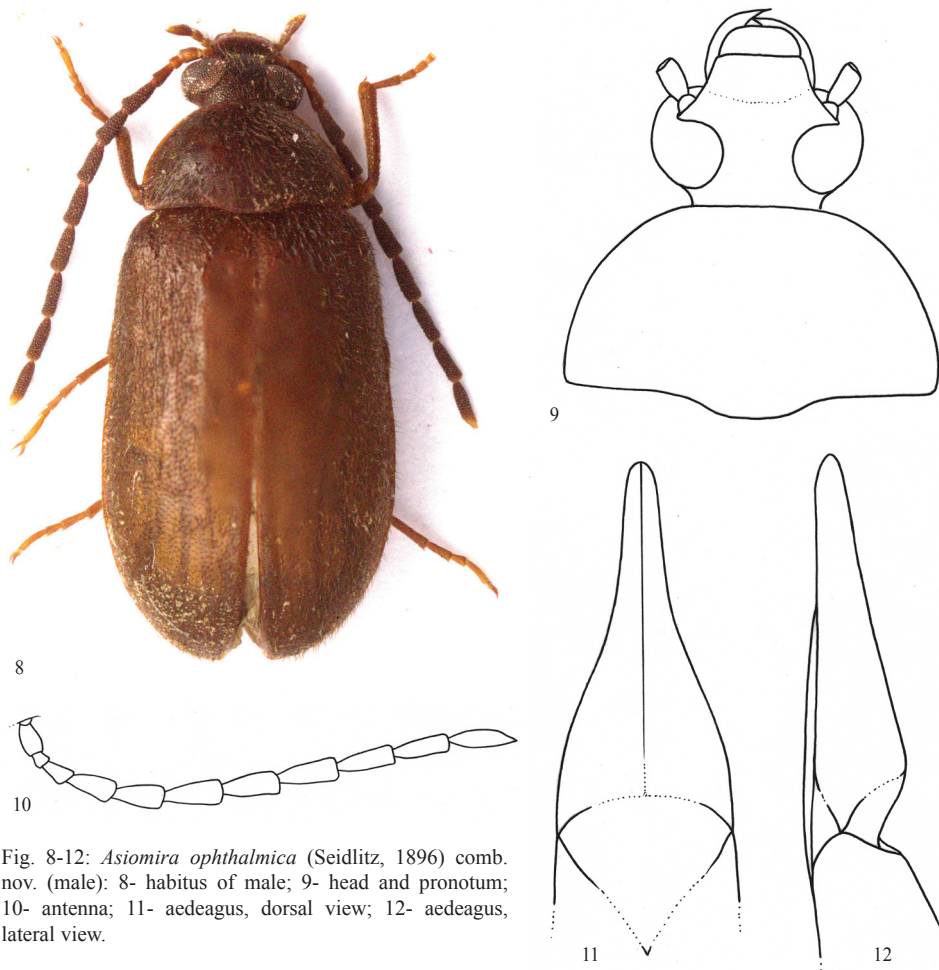


Fig. 8-12: *Asiomira ophthalmica* (Seidlitz, 1896) comb. nov. (male): 8- habitus of male; 9- head and pronotum; 10- antenna; 11- aedeagus, dorsal view; 12- aedeagus, lateral view.

antennomeres 4-11 more matte, with fine microgranulation and punctuation, antennomeres 4-10 distinctly serrate. Antennomere 2 shortest, antennomere 3 nearly twice longer than antennomere 2. RLA (1-11): 1.15 : 0.52 : 1.00 : 1.74 : 1.66 : 1.82 : 1.85 : 2.02 : 1.99 : 1.94 : 2.08. RL/WA (1-11): 2.21 : 1.17 : 1.97 : 2.31 : 2.25 : 2.46 : 2.51 : 3.20 : 3.49 : 3.50 : 5.00. Maxillary palpus pale brown with longer setation, microgranulation and punctuation, matter. Palpomeres 2, 3 distinctly narrowest at base and widest at apex, with a few long pale brown setae. Ultimate palpomere closely axe-shaped. Pronotum (as in Fig. 9) brown, semicircular, dorsal surface with microgranulation, punctuation and pale setation; punctures small-sized, distinctly smaller than those on head. PL 1.28 mm; PW 2.59 mm; PI equal to 49.56. Border lines complete, only in middle of anterior margin and in middle of base indistinct, lateral margins arcuate, base finely bisinuate. Posterior angles distinct, roundly rectangular, anterior angles indistinct, arcuate. Ventral side of body brown, slightly shiny

with sparse setation and punctuation, punctures small-sized. Abdomen pale brown with darker setation, small, shallow punctures and microgranulation. Elytron brown, widest near two thirds of elytral length, dorsal surface setaceous, with microgranulation and punctuation, punctures small-sized, slightly larger than those on pronotum. EL 5.63 mm; EW 3.43 mm; EL/EW 1.64. Elytral striae and elytral interspaces indistinct. Scutellum brown, setaceous, with microgranulation, matte. Elytral epipleura brown, slightly paler than elytron itself, narrowing to ventrite 1, then parallel. Legs narrow, pale brown, with dense, ochre yellow setation. Tibia distinctly widened to apex. Penultimate tarsomere of each tarsus not widened and without membranous lobes. RLT: 1.00 : 0.50 : 0.41 : 0.32 : 1.00 (protarsus); 1.00 : 0.45 : 0.38 : 0.20 : 0.81 (mesotarsus); 1.00 : 0.37 : 0.22 : 0.51 (metatarsus). Both anterior tarsal claws with 5 visible teeth. Aedeagus (as in Figs. 11-12) small, ochre yellow. Basal piece slightly rounded laterally and slightly narrowing dorsally. Apical piece elongate, triangular dorsally and beak-shaped dorsally and laterally. Ratio of length of apical piece to length of basal piece 1: 2.27.

**Variability.** (Males=3). BL 7.85 mm (7.54-8.19 mm); HL 1.27 mm (1.26-1.28 mm); HW 1.42 mm (1.30-1.50 mm); OI 29.68 (27.00-31.82); PL 1.28 mm (1.24-1.33 mm); PW 2.38 mm (2.17-2.59 mm); PI 55.38 (48.45-56.80); EL 5.30 mm (5.04-5.63 mm); EW 3.28 mm (3.06-3.43 mm).

**Distribution.** Iran, Kyrgyzstan, Turkmenistan, Uzbekistan.

***Asiomira rufescens* (Dubrovina, 1982) comb. nov.**

(Figs. 13-15)

*Isomira (Asiomira) rufescens* Dubrovina, 1982: 142.

**Material examined.** (1 ♂): Tigrovaja Balka / Tadjikistan 2-6. / A. Olexa 6 1966, (VNPC).

**Remark.** Habitus as in Fig. 13. Figures of body parts see Dubrovina (1982: 134), head and antennomeres 1-4 (Fig. 2), pronotum (Fig. 8).

Measurements of body parts (male): BL 7.67 mm; HL 1.23 mm; HW 1.38; OI equal to 22.00; PL 1.06 mm; PW 1.98 mm; PI equal to 53.50; EL 5.38 mm; EW 2.81 mm.

RLA (1-11): 0.77 : 0.48 : 1.00 : 1.77 : 1.75 : 2.07 : 2.07 : 2.30 : 2.16 : 2.14 : 2.13.

RL/WA (1-11): 1.65 : 1.04 : 2.55 : 3.19 : 2.80 : 2.90 : 2.58 : 3.07 : 3.27 : 3.43 : 4.10.

RLT: 1.00 : 0.43 : 0.35 : 0.28 : 0.84 (protarsus); 1.00 : 0.43 : 0.35 : 0.26 : 0.82 (mesotarsus); 1.00 : 0.39 : 0.21 : 0.49 (metatarsus).

**Distribution.** Tajikistan.

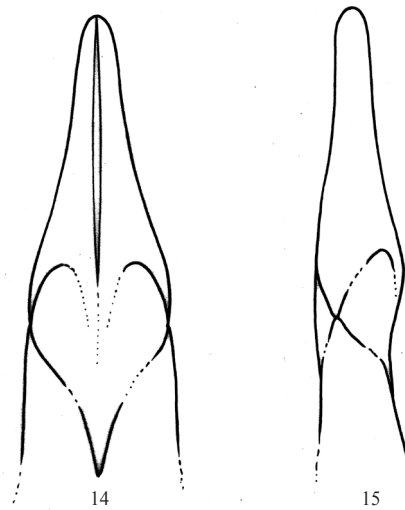


Fig. 13: *Asiomira rufescens* (Dubrovina, 1982) comb. nov.: 13- habitus of male; 14- aedeagus, dorsal view; 15- aedeagus, lateral view.

#### CHECKLIST OF THE SPECIES OF THE GENUS *ASIOMIRA*

genus <i>Asiomira</i> (Dubrovina, 1973) type species <i>Isomira ophthalmica</i> Seidlitz, 1896 = <i>Kirgisomira</i> Weise, 1974 type species <i>Isomira ophthalmica</i> Seidlitz, 1896	
<i>Asiomira firjusana</i> (Dubrovina, 1973)	Tajikistan, Turkmenistan
<i>Asiomira kabadiana</i> (Dubrovina, 1973)	Tajikistan
<i>Asiomira kadleci</i> sp. nov.	Tajikistan
<i>Asiomira keleinikovae</i> (Dubrovina, 1973)	Tajikistan
<i>Asiomira ophthalmica</i> (Seidlitz, 1896)	Iran, Kyrgyzstan, Turkmenistan, Uzbekistan
<i>Asiomira rufescens</i> (Dubrovina, 1982)	Tajikistan

#### DESCRIPTION OF THE SUBGENUS *MUCHEIMIRA* SUBGEN. NOV.

##### *Mucheimira* subgen. nov.

**Type species.** *Isomira stoetznerei* Mucbe, 1981.

**Description.** Habitus (see Novák 2008: 365: Fig. 1; 368: Fig. 6; 371: Fig. 11; 373: Fig. 16; 375: Fig. 21 and Novák 2014: 159: Figs. 16-19) elongate oval, widest near half elytral length from base to apex. Dorsal surface slightly shiny, with dense punctuation, microgranulation and setation. Head and pronotum (see Novák 2008: 365: Fig. 2; 368: Fig. 7; 371: Fig. 12; 373: Fig. 17; 375: Fig. 22 and Novák 2014: 155: Fig. 1; 156: Fig. 6; 157: Fig. 9 and 158: Fig.

12). Head relatively wide, with dense punctuation, microgranulation and setation. Eyes very large, transverse, distinctly excised, space between eyes narrow (OI less than 30); distinctly narrower than diameter of one eye. Antennae relatively long, with setation, exceeding half body length. Antennomeres 1-3 each distinctly shorter than each of antennomeres 4-11. Antennomeres 4-11 long and narrow, with fine microgranulation and punctuation, matte. Antennomeres 4-10 only slightly widest at apex. Antennomere 2 and 3 shortest. Maxillary palpus with setation and microgranulation. Palpomeres 2, 3 distinctly narrowest at base and broadest at apex. Ultimate palpomere knife-shaped or axe-shaped. Pronotum semicircular or semielliptical, dorsal surface with punctuation and setation. Lateral and anterior margins arcuate, posterior angles distinct, anterior angles indistinct, rounded. Elytra widest near half elytral length, dorsal surface with setation and punctuation. Elytral striae and elytral interspaces indistinct. Legs narrow and long, with dense setation. Tibia very slightly widened to apex. Penultimate tarsomere of each tarsus not widened and without membranous lobes.

**Female.** Space between eyes distinctly wider than those in male. Antennomere 3 distinctly longer than antennomere 2 long.

**Differential diagnosis.** (See the key). Species of the subgenus *Mucheimira* subgen. nov. differ from species of genus *Isomira* Mulsant, 1856 mainly by narrow space between eyes in males and by distinct differences between OI of males and females; while *Isomira* species have space between eyes wide in both genders. *Mucheimira* species are clearly different from species of *Asiomira* (Dubrovina, 1973) mainly by oval or elongate oval shape of body and antennomere 2 approximately as long as antennomere 3 in males; while *Asiomira* species have elytra widest near two thirds their length and antennomere 3 distinctly longer than antennomere 2 in males. Species of *Mucheimira* differ from species of *Pseudocistela* Crotch, 1873 mainly by pronotum semicircular or semielliptical, lateral margins of pronotum arcuate, antennomeres narrow, elytral striae indistinct; while *Pseudocistela* species have pronotum narrow, conically narrowing from base to apex, antennomeres strongly serrate and elytral striae distinct. *Mucheimira* species are different from species of genus *Kralia* Novák, 2013 and subgenus *Paraisomira* Dubrovina, 1982 mainly by elytra without distinct rows of punctures in elytral striae and by shorter or axe-shaped ultimate palpomere; while *Kralia* and *Paraisomira* species have elytra with distinct rows of punctures in elytral striae and ultimate palpomere very long and narrow

**Etymology.** Compound name formed by *Muchei-* (named in honour of W. Heinz Muche (Radeberg, Germany) - well known specialist in Alleculinae, who described the type species of the new subgenus) and the ending *-mira* marking part of the genus *Isomira* Mulsant, 1856. Gender feminine.

**Distribution.** China (Guangxi, Yunnan, Sichuan), Nepal, Saudi Arabia.

## CHECKLIST OF THE SPECIES OF THE SUBGENUS *MUCHEIMIRA*

subgenus *Mucheimira* Novák, 2015 type species *Isomira stoetzneri* (Muche, 1981)

<i>Isomira (Mucheimira) bicolorata</i> Muche, 1982	Saudi Arabia
<i>Isomira (Mucheimira) eustrophoides</i> Pic, 1930	China
<i>Isomira (Mucheimira) farkaci</i> Novák, 2014	Nepal
<i>Isomira (Mucheimira) martensi</i> Novák, 2014	Nepal
<i>Isomira (Mucheimira) murzini</i> Novák, 2009	China (Yunnan)
<i>Isomira (Mucheimira) nepalica</i> Novák, 2009	Nepal
<i>Isomira (Mucheimira) pizurae</i> Novák, 2009	Nepal
<i>Isomira (Mucheimira) schawalleri</i> Novák, 2014	Nepal
<i>Isomira (Mucheimira) sichuanica</i> Novák, 2009	China (Sichuan)
<i>Isomira (Mucheimira) stoetzneri</i> Muche, 1981	China (Guangxi, Sichuan)
<i>Isomira (Mucheimira) zhongdianica</i> Novák, 2014	China (Yunnan)

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