

Types of *Scarabaeus babori* Balthasar and status of *Scarabaeus winkleri* Stolfa (Scarabaeinae: Scarabaeini)

Jiří ZÍDEK

Karafiátová 46, CZ-106 00 Praha 10, Czech Republic; jirizidek@volny.cz

Abstract. A lectotype is designated for *Scarabaeus babori* Balthasar 1934 and *Scarabaeus winkleri* Stolfa 1938, recently synonymized with *S. babori*, is reinstated as a valid species.

Key words. *Scarabaeus babori* Balthasar, *S. winkleri* Stolfa, *S. transcaspicus* Stolfa, *S. acuticollis* Motschulsky, Palearctic region.

The type series of *Scarabaeus babori* Balthasar 1934 at the Czech National Museum, Prague, has hitherto consisted of two males and a female, all bearing the following labels: (1) white "Sc. babori Typ. m." [handwritten] "Dr. Balthasar det." [printed]; (2) red "TYPUS" [printed and framed]; (3) white "Elbrus Geb. Persien Rtrr." [printed]; and (4) blue "babori ♂", "babori ♀" and "transcaspicus ♂" handwritten by V. Malý of Prague many years later (sometime in the 90s). Unfortunately, Malý neglected to publish the observation that the type series consists of two species. Therefore, in order to stabilize the taxon, I designate the male illustrated here in Figs. 1 and 3 the lectotype of *S. babori* Balthasar 1934 and remove the male of *S. transcaspicus* Stolfa 1938 from the type series, which is thus limited to the lectotype male and paralectotype female (Fig. 2). Added are printed white labels "*S. babori* Balthasar, LECTOTYPE ♂, des. J. Zídek 2008", "*S. babori* Balthasar, PARALECTOTYPE ♀, det. J. Zídek 2008" and "*S. transcaspicus* Stolfa, nec *S. babori* Balthasar, det. J. Zídek 2008". The lectotype is 33.5 mm long (from tip of clypeus to tip of elytra) and lacks both antennae (only scapes left), maxillary palpi, three right mesotarsomeres and two left and right metatarsomeres. The paralectotype is 35 mm long and lacks much of the right antenna (only scape left) and the left metatarsus.

Balthasar illustrated *S. babori* only in 1963, when he presented drawings of the male habitus (fig. 76) and of the aedeagus in left lateral view (fig. 75.3, not 73.3 as stated on p. 163), the latter after Janssens (1940: fig. 8) who regarded the taxon as a race of *S. sacer* Linné. Janssens apparently saw the male syntype (now lectotype) of *S. babori* (and extracted the aedeagus shown in his fig. 8), because the specimen in his habitus photo (1940: pl. 2, fig. 3) lacks the same tarsomeres and has the same minor indentation on the right side of the pronotal disk as the lectotype. Prior to Janssens (1940), a purported *S. babori* was illustrated by

Stolfa (1938: fig. 3 [aedeagus] and pl. 12, fig. 4 [habitus]), but his habitus photo is not diagnostic and his drawing of the aedeagus pertains to *S. carinatus* (Gebler) (see also Kabakov 1980: 827, 2006: 64).

Kabakov (2006: 64-65) examined a "paratype" male of *Scarabaeus babori* Balthasar 1934 and placed in its synonymy *S. winkleri* Stolfa 1938, a species that he previously (1980: 827) synonymized with *S. acuticollis* Motschulsky. His grounds for the *S. winkleri* = *S. babori* synonymy were that the habitus as well as the parameres of these two taxa are identical. To ascertain which specimen from Balthasar's collection was furnished to Kabakov is no longer possible, but it is apparent from his drawings of aedeagus labeled as *S. babori* (Kabakov 2006: figs. 141, 154-157) that they are neither *S. babori* nor *S. transcaspicus* and instead agree with *S. winkleri* as described and illustrated by Stolfa (1938: 144, fig. 4). I therefore remove *S. winkleri* Stolfa 1938 from the synonymy of *S. babori* and consider it a valid species.

Although the size ranges of the two species overlap, *S. winkleri* is on the average smaller (27-34 mm) than *S. babori* (31-40 mm), has the occiput and pronotum less densely, coarsely and deeply punctate, and its clypeal teeth are more slender, pointed and evenly spaced. These differences are subtle, however, and the best identification criterion thus provide the parameres, which in *S. winkleri* are more slender (viewed laterally) and have the ventrally curved apices much longer (Fig. 4). In this regard a remark is in order concerning zur Strassen's (1967) key, where in coupling 89 the paramere apices are characterized as curved out in *S. babori* but nearly parallel in *S. winkleri*. In reality the apices curve out in both species and are straight (viewed dorsally) and much less divergent in *S. acuticollis* (Fig. 5).

Past misidentifications make delimiting geographic distributions of *S. babori* and *S. winkleri* necessarily tentative. As far as known, both species occur in western Pakistan, Afghanistan and Iran, and *S. winkleri* extends also into central Asia (Turkmenistan, Uzbekistan), southern Kazakhstan and westernmost China (Kuldja; Stolfa 1938). In western Pakistan and parts of Iran the two species may be sympatric, whereas in Afghanistan *S. babori* has been recorded from the south and *S. winkleri* from the north. Kabakov (1980) listed *S. babori* as present also in Kyrgyzstan, Tajikistan and easternmost Turkey (Ararat), but in at least the former two countries the records more likely concern *S. winkleri*.

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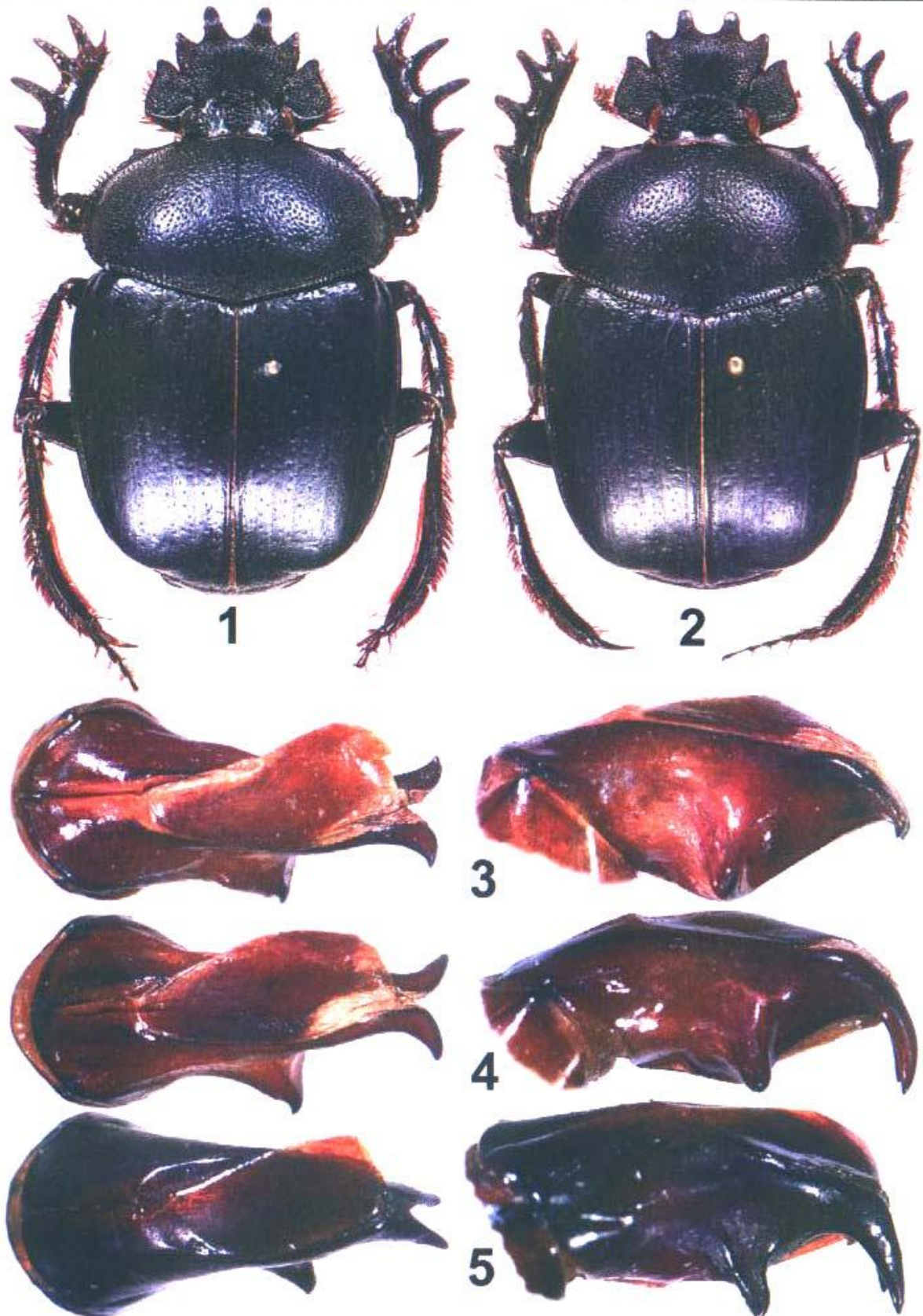
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Figs 1-5 *Scarabaeus babori* Balthasar (1-3), *S. winkleri* Stolfa (4) and *S. acuticollis* Motschulsky (5). 1 – *S. babori*, habitus of lectotype male. 2 – *S. babori*, habitus of paralectotype female. 3 – *S. babori*, parameres of lectotype in dorsal and left lateral views. 4 – *S. winkleri*, parameres in dorsal and left lateral views. 5 – *S. acuticollis*, parameres in dorsal and left lateral views.