

## New or Little-known Tenebrionid Beetles (Coleoptera) from Taiwan (13) Resurrection of Seven Species from Synonymy

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**Abstract** Species synonymized with *Derispia sauteri* KASZAB, 1946 were re-examined and following names are resurrected as valid species: *Derispia zoltani* MASUMOTO, 1981, status resurrected, *D. lalashana* MASUMOTO, AKITA et LEE, 2013, status resurrected, *D. wangi* MASUMOTO, AKITA et LEE, 2013, status resurrected, *D. tatachiaensis* MASUMOTO, AKITA et LEE, 2013, status resurrected, *D. tsaoui* MASUMOTO, AKITA et LEE, 2013, status resurrected, and *D. liyuanensis* MASUMOTO, AKITA et LEE, 2014, status resurrected. *Byrsax kawadai* MASUMOTO, 1982, is resurrected from synonymy with *Byrsax shibatai* MASUMOTO, 1982.

This is the 13th paper of the results of our ongoing research on new or little-known tenebrionid beetles from Taiwan. We would like to express our opinion about some species synonymized earlier. In “the Catalogue of Formosan Tenebrionidae (Insecta: Coleoptera)”, ANDO *et al.* (2016) treated several described species as synonyms. Of those, we examined again *Derispia sauteri* KASZAB, 1946 and its synonyms, and came to the conclusion that most of them are valid species.

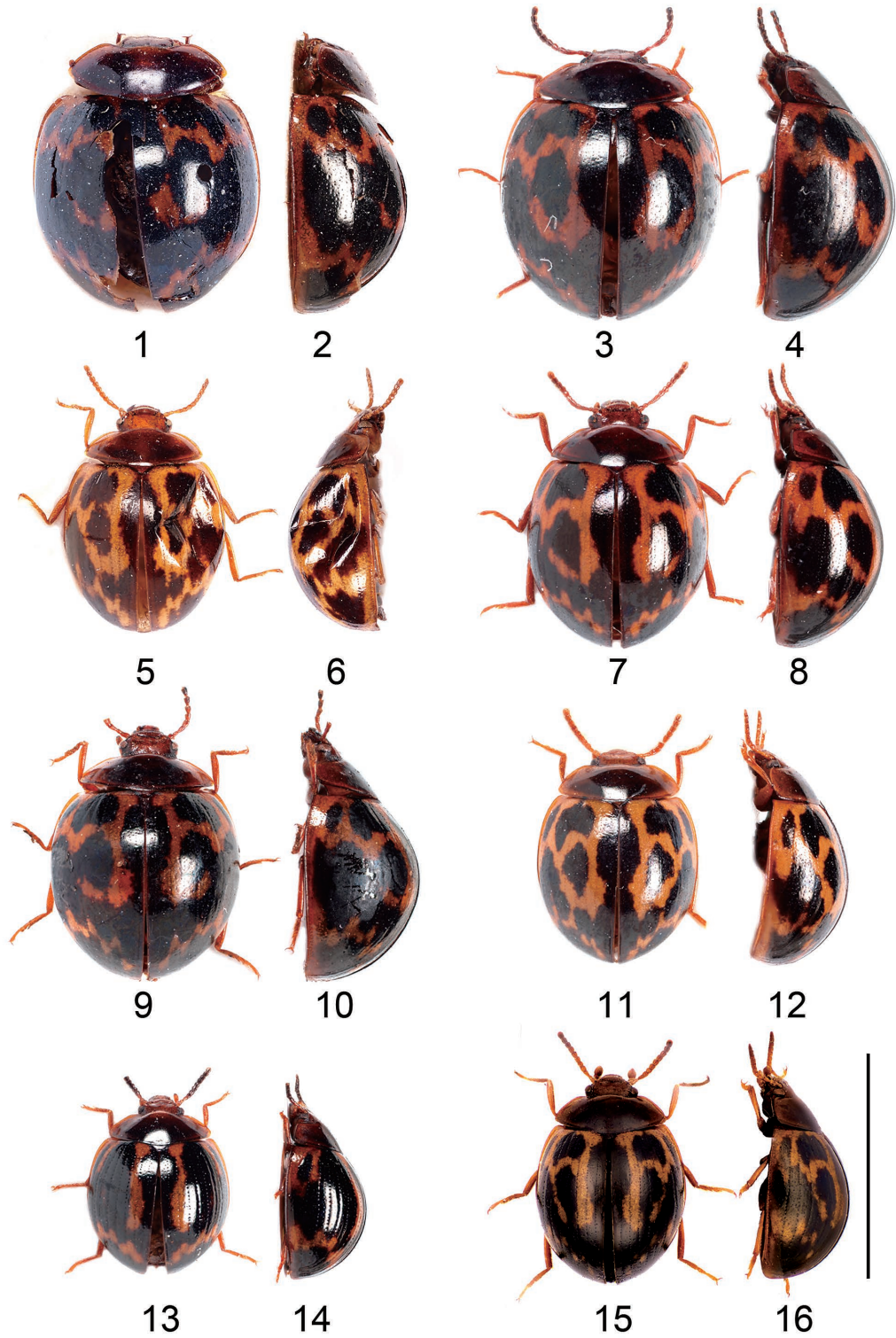
We also re-examined *Byrsax shibatai* MASUMOTO, 1982 and *B. kawadai* MASUMOTO, 1982. The latter was synonymized with the former by MASUMOTO *et al.* (2005). After a detailed comparison, we also recognized that *Byrsax kawadai* MASUMOTO, 1982 can be distinguished from *B. shibatai* by several morphological characters. Thus, we are going to resurrect *B. kawadai* as a varied species.

We would like to express cordial thanks to Dr. Ottó MERKL, the Hungarian Natural History Museum, Budapest for lending the holotypes of *Derispia sauteri* KASZAB, 1946, *D. zoltani* MASUMOTO, 1981, and a series of specimens for comparison preserved in the museum. We deeply thank Dr. Ming-Lun JENG and Dr. Jing-Fu TSAI, the National Museum of Natural Science, Taichung for lending the type specimens of *Derispia* species we ever described and other recently collected specimens preserved in the museum. We also thank Dr. Makoto KIUCHI (Tsukuba City) for taking photographs inserted in this paper. Finally, special thanks are due to Dr. Jun-ichi AOKI (Tokyo) and Mr. Shigeaki KONDO (Urayasu City) for giving us invaluable advice.

### 1. Species Synonymized with *Derispia sauteri* KASZAB

ANDO *et al.* (2016) examined the holotypes of *Derispia sauteri* KASZAB, 1946 and *D. zoltani* MASUMOTO, 1981, and a large number of specimens from Nantou County and one specimen from Hualien County. They treated *Derispia zoltani* MASUMOTO, 1981 and the six similar species as synonyms of *Derispia sauteri* KASZAB, 1946, widely occurring in mountainous forest areas of Taiwan, based on elytral patches, and sizes and numbers of elytral punctures which they considered variable interspecifically.

We carefully examined *Derispia sauteri* KASZAB, 1946 and also examined those species synonymized. *Derispia sauteri* was originally described from Kosempo (= Chiasien, in Kaohsiung City),



and has a large-sized body (about 6 mm long) and reduced hind wings.

The other species synonymized, although variable in body size, also have reduced hind wings and they are flightless. They are: *Derispia zoltani* MASUMOTO, 1981, *D. tengchiensis* MASUMOTO, AKITA et LEE, 2013, *D. lalashana* MASUMOTO, AKITA et LEE, 2013, *D. wangi* MASUMOTO, AKITA et LEE, 2013, *D. tatchiaensis* MASUMOTO, AKITA et LEE, 2013, *D. tsaoui* MASUMOTO, AKITA et LEE, 2013, and *D. liyuanensis* MASUMOTO, AKITA et LEE, 2014.

In our first research time we used a specimen labelled “*Derispia sauteri* KASZAB, 1946, det. by Z. KASZAB” for comparison with unknown species. This specimen actually belongs to an unknown species. On this occasion we were able to compare again every holotype of the problematical species with that of *D. sauteri*. We confirm that *D. tengchiensis* MASUMOTO, AKITA et LEE, 2013 is really a synonym of *D. sauteri*, as ANDO *et al.* (2016) pointed out.

However, we are of the opinion that, except *D. tengchiensis*, the others are valid species based on their body sizes and shapes in lateral view, shapes of male genitalia, and the diagnostic characters mentioned in each original description. We were also able to confirm that those differences are clear and variations are small within each species. Therefore, the species synonymized are resurrect them from synonymy. Most of these species occur allo- or parapatrically. The body sizes are noticeably different between *D. sauteri* (= *tengchiensis*) and *D. tsaoui*, which sometimes inhabit the same place together.

#### ***Derispia sauteri* KASZAB, 1946**

(Figs. 1–4)

*Derispia sauteri* KASZAB, 1946: 108. Type locality: Formosa: Kosempo.

*Derispia tengchiensis* MASUMOTO, AKITA et LEE, 2013: 123 (Figs. 3 & 4). Type locality: Tengchi, Kaohsiung Hsien, Taiwan [synonymized by ANDO *et al.*, 2016].

#### ***Derispia zoltani* MASUMOTO, 1981, status resurrected**

(Figs. 5 & 6)

*Derispia zoltani* MASUMOTO, 1981: 22. Type locality: Alishan (2,400 m), Chiayi Hsien [Taiwan].

*Derispia sauteri*: ANDO *et al.*, 2016: 52 [nec KASZAB, 1946].

#### ***Derispia lalashana* MASUMOTO, AKITA et LEE, 2013, status resurrected**

(Figs. 7 & 8)

*Derispia lalashana* MASUMOTO, AKITA et LEE, 2013: 126. Type locality: Lala-shan, Taoyuan Hsien, Taiwan.

*Derispia sauteri*: ANDO *et al.*, 2016: 52 [nec KASZAB, 1946].

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Figs. 1–16. Habitus of Taiwanese *Derispia* spp., holotypes and males (odd numbers: dorsal view; even numbers: lateral view). — 1 & 2, *Derispia sauteri* KASZAB, 1946; 3 & 4, ditto (holotype of *D. tengchiensis* MASUMOTO, AKITA et LEE, 2013); 5 & 6, *D. zoltani* MASUMOTO, 1981, status resurrected; 7 & 8, *D. lalashana* MASUMOTO, AKITA et LEE, 2013, status resurrected; 9 & 10, *D. wangi* MASUMOTO, AKITA et LEE, 2013, status resurrected; 11 & 12, *D. tatchiaensis* MASUMOTO, AKITA et LEE, 2013, status resurrected; 13 & 14, *D. tsaoui* MASUMOTO, AKITA et LEE, 2013, status resurrected; 15 & 16, *D. liyuanensis* MASUMOTO, AKITA et LEE, 2014, status resurrected.

***Derispia wangi* MASUMOTO, AKITA et LEE, 2013, status resurrected**

(Figs. 9 &amp; 10)

*Derispia wangi* MASUMOTO, AKITA et LEE, 2013: 128. Type locality: Taiwan: Nantou, Hsitou.*Derispia sauteri*: ANDO *et al.*, 2016: 52 [nec KASZAB, 1946].***Derispia tatchianensis* MASUMOTO, AKITA et LEE, 2013, status resurrected**

(Figs. 11 &amp; 12)

*Derispia tatchianensis* MASUMOTO, AKITA et LEE, 2013: 130. Type locality: Taiwan, Nantou, Tatchia.*Derispia sauteri*: ANDO *et al.*, 2016: 52 [nec KASZAB, 1946].***Derispia tsaoui* MASUMOTO, AKITA et LEE, 2013, status resurrected**

(Figs. 13 &amp; 14)

*Derispia tsaoui* MASUMOTO, AKITA et LEE, 2013: 132. Type locality: Taiwan: Kaohsiung, Shihshan logging trail.*Derispia sauteri*: ANDO *et al.*, 2016: 52 [nec KASZAB, 1946].***Derispia liyuanensis* MASUMOTO, AKITA et LEE, 2014, status resurrected**

(Figs. 15 &amp; 16)

*Derispia liyuanensis* MASUMOTO, AKITA et LEE, 2014: 244. Type locality: Taiwan: Taitung, Liyuan.*Derispia sauteri*: ANDO *et al.*, 2016: 52 [nec KASZAB, 1946].**2. A Species Synonymized with *Byrsax shibatai* MASUMOTO**

*Byrsax kawadai* MASUMOTO, 1982 has been regarded as a synonym of *B. shibatai* MASUMOTO, 1982 for a long time by reasons of the very similar body shape to and sympatric occurrence.

We examined again the holotype (male) of each species and confirmed that both species are valid. *Byrsax kawadai* is separated from *B. shibatai* by the following features (the first comments for *B. kawadai* and comments in parentheses for *B. shibatai*).

Genae without acute projection (genae with small triangular, forward-directing projection). Antennomeres 4–10 only slightly produced inwardly, antennomere 3 not produced (antennomeres 4–10 strongly produced inwardly, antennomere 3 clearly produced inwardly and also produced outwardly); antennomere 11 large, 2.46 times as long as antennomere 10 (antennomere 11 smaller, 1.38 times as long as antennomere 10). Lateral margins of pronotum and elytra with deep crenulation (lateral margins of pronotum and elytra with shallow crenulation). Meso- and metatibiae with outer margins weakly produced in middle (meso- and metatibiae with outer margins rather strongly produced in middle). Abdomen scattered with small and shallow punctures (abdomen scattered with large and deep punctures). Male genitalia with apicale long, 0.52 times total length (male genitalia with apicale short, 0.38 times total length).

***Byrsax kawadai* MASUMOTO, 1982, status resurrected***Byrsax kawadai* MASUMOTO, 1982: 28. Type locality: Nanshanchi, Nantou Hsien, [Taiwan].*Byrsax shibatai*: MASUMOTO, AKITA & LEE, 2005: 254 [nec MASUMOTO, 1982].*Byrsax shibatai*: ANDO *et al.*, 2016: 18 [nec MASUMOTO, 1982].

## 要 約

益本仁雄・秋田勝己・李 奇峰：台湾産ゴミムシダマシ科(鞘翅目)甲虫の新種・希少種。(13)シノニムからの復活7種について。———*Derispia sauteri* KASZAB, 1946 のシノニムとされたクロホシテントウゴミムシダマシ属の6種, すなわち *Derispia zoltani* MASUMOTO, 1981, *D. lalashana* MASUMOTO, AKITA et LEE, 2013, *D. wangi* MASUMOTO, AKITA et LEE, 2013, *D. tatachiaensis* MASUMOTO, AKITA et LEE, 2013, *D. tsaoui* MASUMOTO, AKITA et LEE, 2013, *D. liyuanensis* MASUMOTO, AKITA et LEE, 2014 は, 明らかな独立種であることから, これらを復活させた。これらはいずれも後翅が退化しており, 体サイズや体型, ♂交尾器などの差が顕著である。多くは異所的もしくは側所的に分布するものと思われるが, *D. sauteri* と *D. tsaoui* のように著しく体サイズが異なる種は混棲する。さらに *Byrsax shibatai* MASUMOTO, 1982 のシノニムであるとされた *B. kawadai* MASUMOTO, 1982 も, 両者のホロタイプ標本を再検討した結果, 触角や前胸背板, 中・後脛節, ♂交尾器などの形状が大きく異なり別種であることから復活させた。なお, これらの2種は混棲する。

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