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A review of the genus *Amsactoides* Matsumura (Lepidoptera, Arctiidae), with description of a new species from the continental Asia

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Abstract The sexually dimorphic genus *Amsactoides* Matsumura was described for the single species from Taiwan, *A. solitaria* (Wileman, 1910), to which all other specimens of the genus from the continent were attributed. Comparing male morphological characters, including the genitalia structure, of the type species from Taiwan and continental specimens show that latter belong to the a species, *A. guangxica* Dubatolov et Kishida, sp. nov.

The sexually strongly dimorphic genus *Amsactoides* Matsumura, 1927 was described for the single species from Taiwan, *Creatonotos formosae* Strand, 1915, basing on a male specimen. Sixty years later, Inoue (1988) synonymised it with *Diacrisia solitaria* Wileman, 1910 that was known by very different females only, although Wileman knew males for his *D. solitaria* Wil. females but did not published this (Inoue, 1988). The valid generic status was accepted by following authors: Kôda (1988), Fang (1985, 2000). Specimens of this genus were later found in different places of the continental South-Eastern Asia: Hongkong (Inoue, 1988), Fujian (Fang, 1982), Hunan, Guangdong, Hainan, Guangxi (Fang, 2000), but nobody tried to compare morphology of the nominotypical and continental specimens of *Amsactoides*. Our study of *Amsactoides* specimens from the collection by Yasunori Kishida, show that the continental specimens differ from the nominotypical ones on a specific level. This allowed us to prepare the following review.

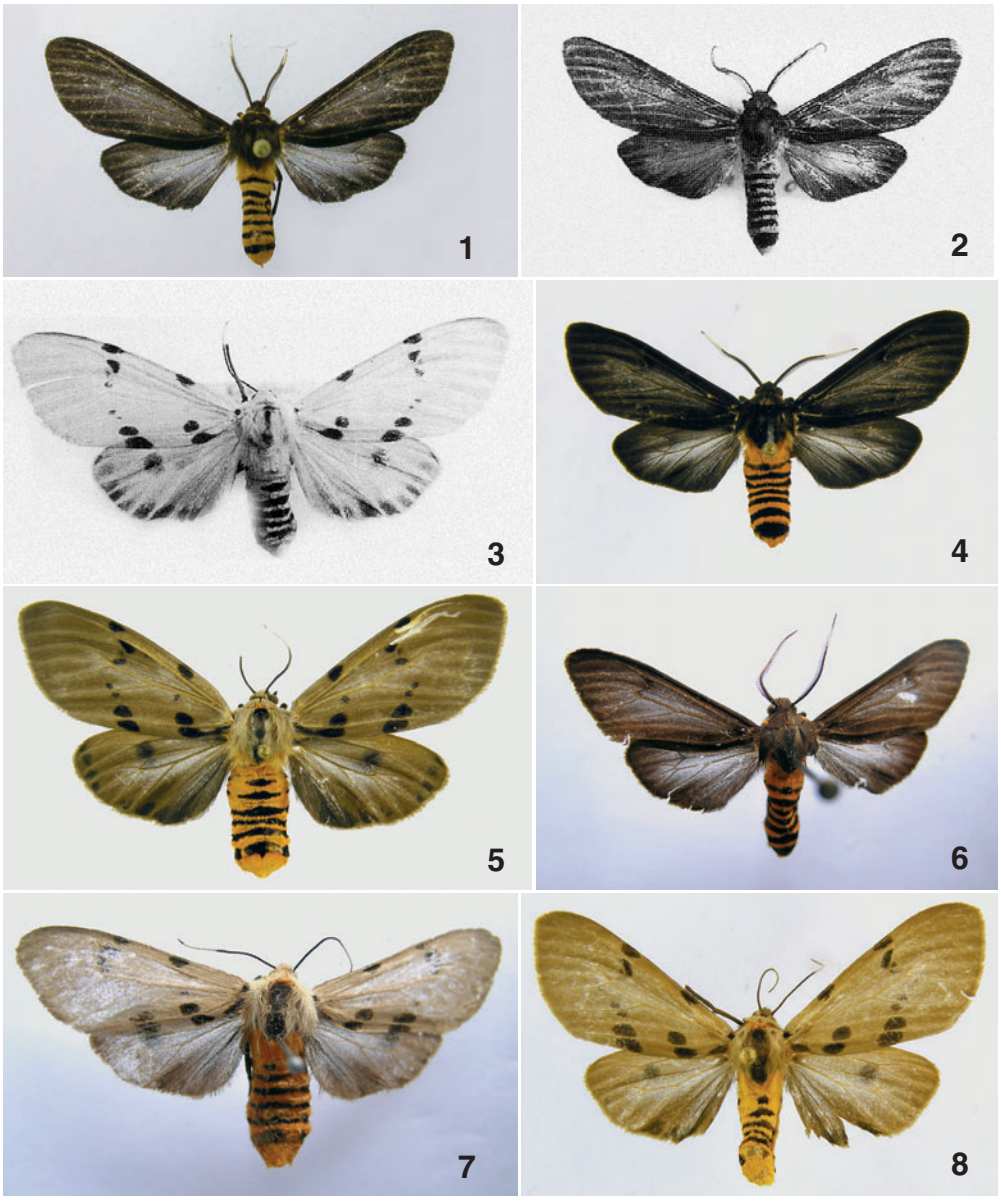
Material from two studied collections is abbreviated: IZAB – Institute of Zoology, Academy of Sciences, Beijing, China; NSMT – National Museum of Nature and Science, Tokyo; SCAU – South China Agricultural University, Guangzhou; YK – Yasunori Kishida, Tokyo, Japan.

Amsactoides Matsumura

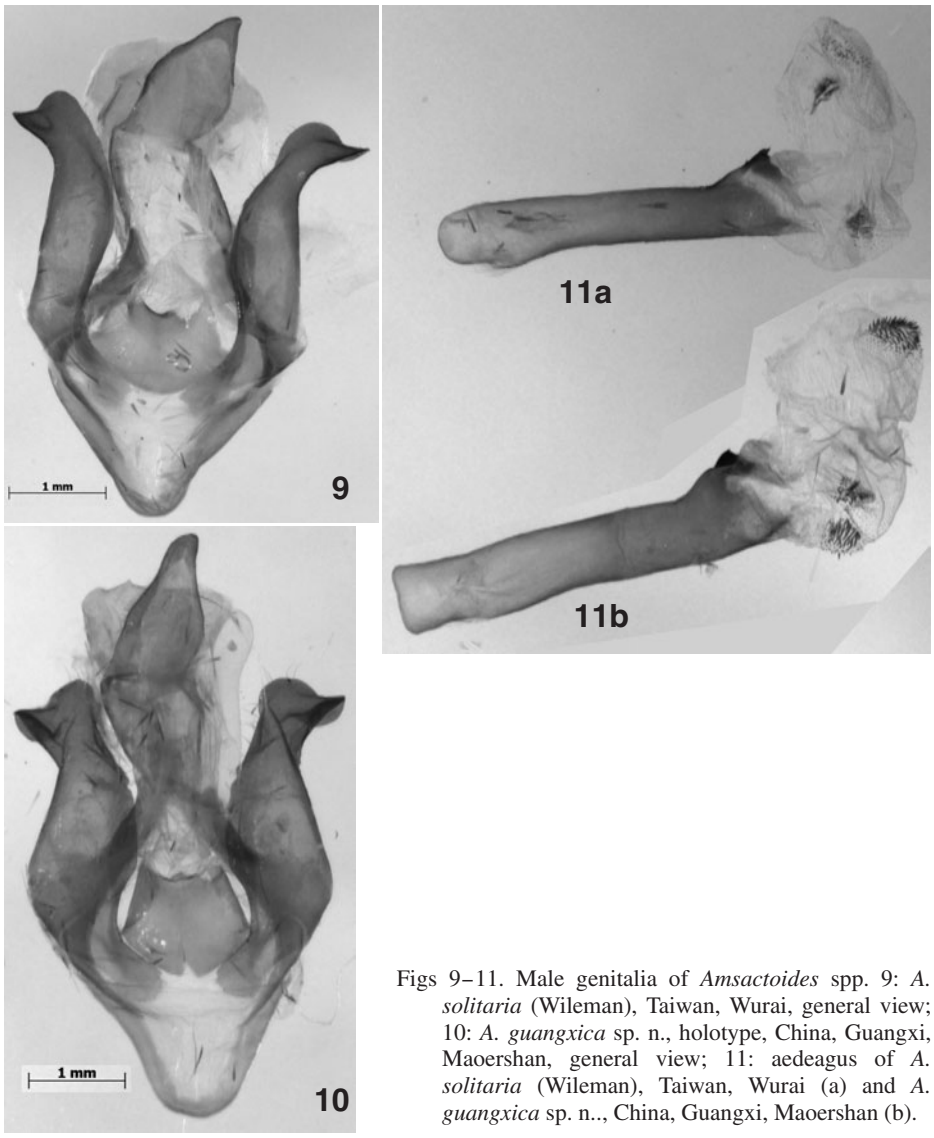
Amsactoides Matsumura, 1927, *J. Coll. Agric. Hokkaido imp. Univ.* **19** (1): 53.

Type species: *Creatonotos formosae* Strand, 1915.

Diagnosis. Antennae shortly bipectinate in males, double serrate in females, black with white apical part. Palpi short and stout, porrect, only slightly longer than dense hairs on frons. Eyes naked, large and strongly bulging in males and noticeably smaller in females. Proboscis short, nearly equal to head width. Head and thorax black in males, grey in females. Tegulae in females with diffuse central black spots. Fore tibiae simple, epiphysys reaching the distal quarter. Middle tibiae with one pair, hind one with two pairs of relatively thick spurs, apical one is nearly equal to tibia diameter, proximal are noticeably shorter. Claws with a light incision at middle. Vein R_2 on forewings stalking with R_{3+5} (venation type C by Sotavalta, 1964). Wing and body pattern sexually dimorphic. Male wings black with lightening along veins of forewings, while hindwings semitransparent in middle and basal parts. Female wings brownish-grey, forewings with two middle rows of black spots and two additional at the base. Hindwings semitransparent along cubital stem, often with diffuse blackish spots along external margin and a discal spot. Thorax with a black longitudinal dorsal stripe. Abdomen yellow in both sexes, with black dorsal bands. Tympanum with small flattened inflation.



Figs 1–8. *Amsactoides* spp. 1-3. *A. solitaria* (Wileman). 1. Taiwan, ♂, Wurai; 2: ♂, *solitaria* Wileman, holotype (BMNH), after Inoue, 1988; 3: ♀, *formosae* Strand, holotype (DEI), after Inoue, 1988. 4-8. *A. guangxica* sp. n. 4: ♂, holotype, China, Guangxi, Maoershan; 5: ♀, paratype, China, Guangxi, Maoershan; 6: ♂, paratype, China, Guangxi, Longsheng; 7: ♀, China, Guangxi, Fangcheng fulong; 8: ♀, Vietnam, Ninh Binh, Gia Vien, Cuc Phuong. 6, 7 – by courtesy of Prof. Fang and Dr Legalov.



Figs 9–11. Male genitalia of *Amsactoides* spp. 9: *A. solitaria* (Wileman), Taiwan, Wurai, general view; 10: *A. guangxica* sp. n., holotype, China, Guangxi, Maoershan, general view; 11: aedeagus of *A. solitaria* (Wileman), Taiwan, Wurai (a) and *A. guangxica* sp. n.., China, Guangxi, Maoershan (b).

Male genitalia. Uncus short, triangular, broad at base, tegumen with a broad basal 'collar'. Valvae elongate, without spines or processes, with rounded and complicatedly inwardly curved apices. Juxta pentagonal, slightly shorter than its width. Aedeagus with spines at apex, vesica with spinicule plates. VIII abdominal sternites with lateral lobes covering abdomen apex.

Distribution. Taiwan; continental China: Fujiang, Hunan, Guangdong, Hainan, Guangxi (Fang, 2000) and Hong Kong (Inoue, 1988); North Vietnam.

Amsactoides solitaria (Wileman) (Figs 1–3)

Diacrisia solitaria Wileman, 1910, *Entomologist* **43**: 245 (♀) (type locality: "Kanshirei (1000 ft.)"); Rothschild in Seitz, 1914, *Gross-Schmett. Erde* **10**: 249, fig. 19f (♀) (Formosa); Strand, 1915; *Ent. Mitt*. **4** (1/3): 16 (Kosempo... und "Shis A 5 6"); Strand, 1919, *Lep. Cat*. **22**: 224 (Formosa); Matsumura, 1930; *Insecta matsum*. **5**: 69; Matsumura, 1931; *6000 illustrated insects of the Japanese Empire*: 960, fig. (♀).

Spilosoma solitaria: Hampson, 1920, *Cat. Lep. Phal. Br. Mus*. (Suppl.) **2**: 401, pl. LX, fig. 21 (♀) (Formosa,

Kanshirei); Fang, 1982: 223 (... Taiwan).

Creatonotos formosae Strand, 1915, *Ent. Mitt*. **4** (1/3): 13-14 (♂) (type locality: "Kankau (Koshun)", additional localities: "Polisha..., Kosempo..., Alikang"); Strand, 1919, *Lep. Cat*. **22**: 245 (Formosa).

Amsactoides formosae: Matsumura, 1927, *J. Coll. Agric. Hokkaido Imp. Univ*. **19**: 52-53 (♂) (Formosa (Koshun)); Matsumura, 1930; *Insecta matsum*. **5**: 70; Matsumura, 1931, *6000 illustrated insects of the Japanese Empire*: 945 (♂).

Amsactoides solitarius: Inoue, 1988, *Tyô to Ga* **39** (2): 107, fig. 22 (♂, holotype of *Creatonotos formosae*), 23 (♀, holotype of *Diacrisia solitaria*).

Amsactoides solitaria: Fang, 1985: 48 (..., Taiwan); Fang, 2000: 407 (..., Taiwan); Kôda, 1988, *Tyô to Ga* **39** (1): 19-21, 71: fig. 111, E (♂), F (♀) (... Taiwan).

Distribution. Taiwan.

Material. 1 ♂, Taiwan, Taipei, Wurai, 2. IV. 1985, M. Seino (YK); 1 ♂, Taiwan, Pingtung, Kenting Park, 23-24. X. 1979, H. Endo (NSMT).

Diagnosis. Male. Forewing length of the studied specimen 19 mm. Wing, thorax and head coloration light black, forewings with light veins. Apical dark band narrow, like others. Female wing ground colour grey, forewings with a typical pattern of black spots.

Male genitalia (Figs 9, 11a). Uncus relatively broad at base, about 1.5–1.6 times longer than its maximal width. Valvae relatively narrow, about 3.25 times longer than their maximal width. Vesica with two dense spiniculi plates, one at base, another near the apex. Spiniculi in the third apical spiniculi plate are scarce. Apical dorsal black abdominal band reduced.

Amsactoides guangxica Dubatolov et Kishida, **sp. nov.** (Figs 4–8)

Spilosoma solitaria: Fang, 1982: 223, pl. 71, fig. 1643 (♀) (Fujian).

Amsactoides solitaria: Fang, 1985: 48, pl. IV, fig. 52 (♀) (Fujiang); Fang, 2000: 406-407, pl. VII, fig. 2 (♂, ♀) (Fujiang (Sha Xian), Hunan (Tongdao), Guangdong, Hainan, Guangxi (Longsheng), ...); Kôda, 1988, *Tyô to Ga* **39** (1): 19-21, fig. (East China ...).

Amsactoides solitarius: Inoue, 1988; *Tyô to Ga* **39** (2): 107 (New Territory, Kawloon, Hong Kong).

Distribution. Continental China: Fujiang, Hunan, Guangdong, Hainan, Guangxi (Fang, 2000) and Hongkong (Inoue, 1988); North Vietnam.

Type material. Holotype – ♂, China, Guangxi, Quilin, Maoershan, 500 m, bred ex ovo, 25-30. IX. 2007. Deposited in South China Agricultural University, Guangzhou, Guandong, China. Paratypes: 21 ♂ 14 ♀, the same data as holotype (SCAU); 1 ♂, same locarty as holotype; 2 ♂ 1 ♀, 5-10. VIII. 2007, China, Guangxi, Longsheng, 170 m, 7. IX. 1983 (IZAB); 1 ♀, China, Guangxi, Fangcheng fulong, 240 m, 15. III. 1998 (IZAB). Additional material. VIETNAM: 1 ♀, Ninh Binh, Gia Vien, Cuc Phuong 160 m, 20-21. III. 1998, K. Yazaki leg. (YK), 1 ♂, 8. XI. 1979, B. Tanaka leg. (NSMT).

Diagnosis. Male. Holotype forewing length 17 mm. Wing, thorax and head dark black, forewings with somewhat lightening in cubital part and along veins. Apical dark band broad, several times broader than others.

Female. Paratype forewing length 23 mm, the specimen from Vietnam has forewing length 22 mm. Wing ground coloration dark grey, forewings with a typical pattern of black spots. Hindwings with semitransparent cubital part and diffuse black dorsal and few marginal spots, including four spots at apical margin. Apical dorsal black abdominal band wider than others.

Male genitalia (Figs 10, 11b). Uncus not very broad at base, about 2 times longer than its maximal width. Valvae relatively broader, about 2.4 times longer than their maximal width. Vesica with three dense spiniculi plates, two at base, another at apex.

Food plants. Morus and Taraxacum.

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