

Remarks on the species composition of the genus *Agrisius*, with a description of a new species from Laos (Lepidoptera, Arctiidae: Lithosiinae)

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Abstract *Agrisius excellens* is described from Laos; it is characterized by large dark markings on forewings and the male genitalia structure. A list of known species of the genus *Agrisius* is given; *A. japonicus* Leech is raised to a species group level. A list of species of the genus grouped into three species groups is given.

The genus *Agrisius* Walker, 1855 was described as a monotypic genus for *Agrisius guttivitta* Walker, 1855 from North India. Now it contains three species groups established here, with different male genitalia structure (Figs 1-8):

***Guttivitta* Species Group** (revised by Dubatolov, Kishida, Wang, 2012):

Agrisius guttivitta Walker, 1855 (Fig. 4); *List Specimens lepid. Insects Colln Br. Mus.* **3**: 723. Type locality: North India. Distribution: India (Himalayas), Nepal.

Agrisius similis Fang, 1991 (Fig. 3); *Acta Ent. sin.* **34** (4): 470-471, fig. 1. Type locality: Jiping, Yunnan, 1700 m [China]. Distribution: China (Yunnan), North Vietnam. Holotype – male.

Agrisius aestivalis Dubatolov, Kishida et Wang, 2012 (Fig. 2); *Lepid. Sci.* **63**: 116-118, figs 2, 6. Type locality: China, Guangdong, Shaoguan, Nanling, 1,000-1,400 m. Distribution: China (Guangdong; probably also Anhui, Zhejiang, Jiangxi, Hubei, Hunan, Shaanxi, Guangxi, Sichuan). Holotype – male.

Agrisius vernalis Dubatolov, Kishida et Wang, 2012 (Fig. 1); *Lepid. Sci.* **63**: 116, figs 1, 5. Type locality: China, Guangdong, Shaoguan, Nanling, 900-1,400 m. Distribution: China (Guangdong). Holotype – male.

Remarks. The species group is characterized by a bifurcated uncus and a bifurcated sacculus; the aedeagus lacks a prick (Figs 1-4).

***Fuliginosus* Species Group** (not revised yet):

Agrisius fuliginosus Moore, 1872 (Figs 5, 9), **stat. rev.**; *Proc. zool. Soc. Lond.* **1872**: 571, pl. 33, fig. 3. Type locality: India.

Agrisius albula Orhant, 1997; *Bull. Soc. ent. Mulhouse* **1997** (Juillet-Septembre): 33-35, fig. 1, 4, 7, 10. Type locality: Myanmar, Inpy In, 1425 m. Holotype – female.

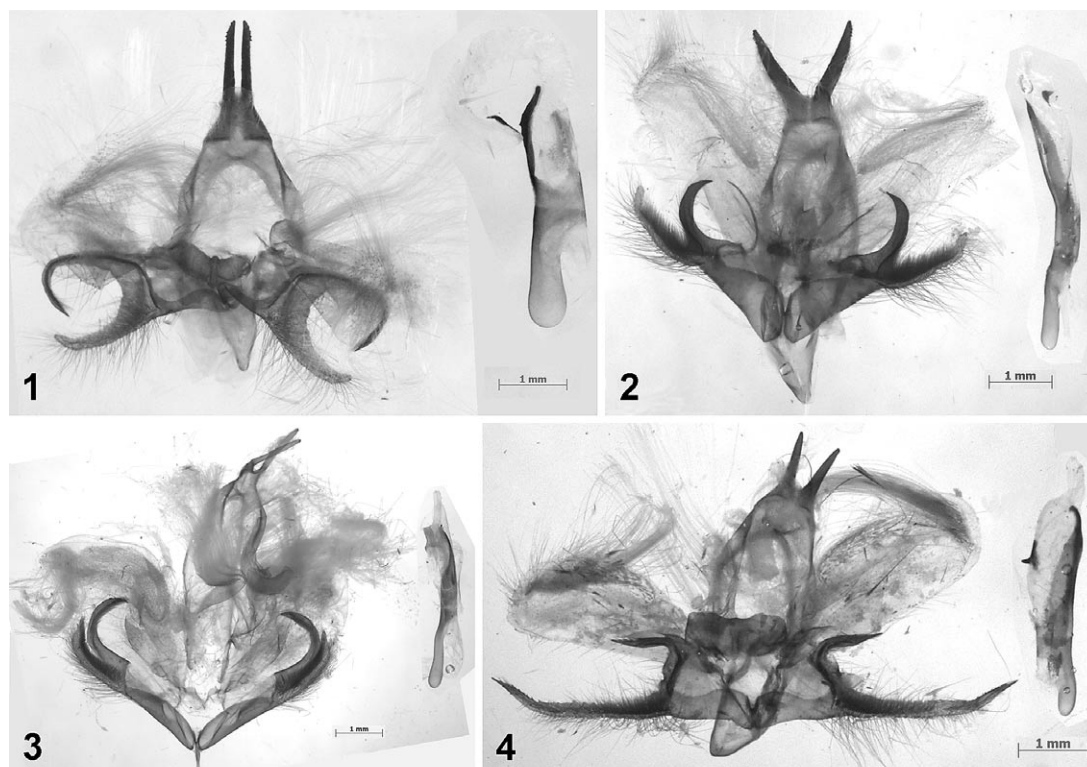
Agrisius bolovenae Orhant, 2012; *Bull. Soc. ent. Mulhouse* **68** (3): 37, figs 1-3. Type locality: Laos, Tad Fane, 1000 m. Holotype – male.

Distribution: India (the Himalaya), Indochina.

Remarks. The species group is characterized by a double bulbous uncus both its parts terminating by small spines or processes; membranous oval valves without any sclerotized processes; the aedeagus with a small or large prick (Fig. 5). *A. bolovenae* Orhant, 2012 is probably a junior synonym of *A. albula* Orhant, 1997.

***Japonicus* Species Group** (not revised yet):

Agrisius japonicus Leech, 1889 (Figs 6-7, 10-11), **stat. rev.**; *Proc. zool. Soc. Lond.* **1888**: 598, t. 30,



Figs 1-4. *Agrisius* male genitalia of the *Guttivitta* Species Group. 1. *A. vernalis* Dubatolov, Kishida et Wang, holotype, China, Guangdong, Nanling. 2. *A. aestivalis* Dubatolov, Kishida et Wang, holotype, China, Guangdong, Nanling. 3. *A. similis* Fang, China, East Yunnan, Baiyanzishan, Yuanyang. 4. *A. guttivitta* Wlk., Nepal, Godavari.

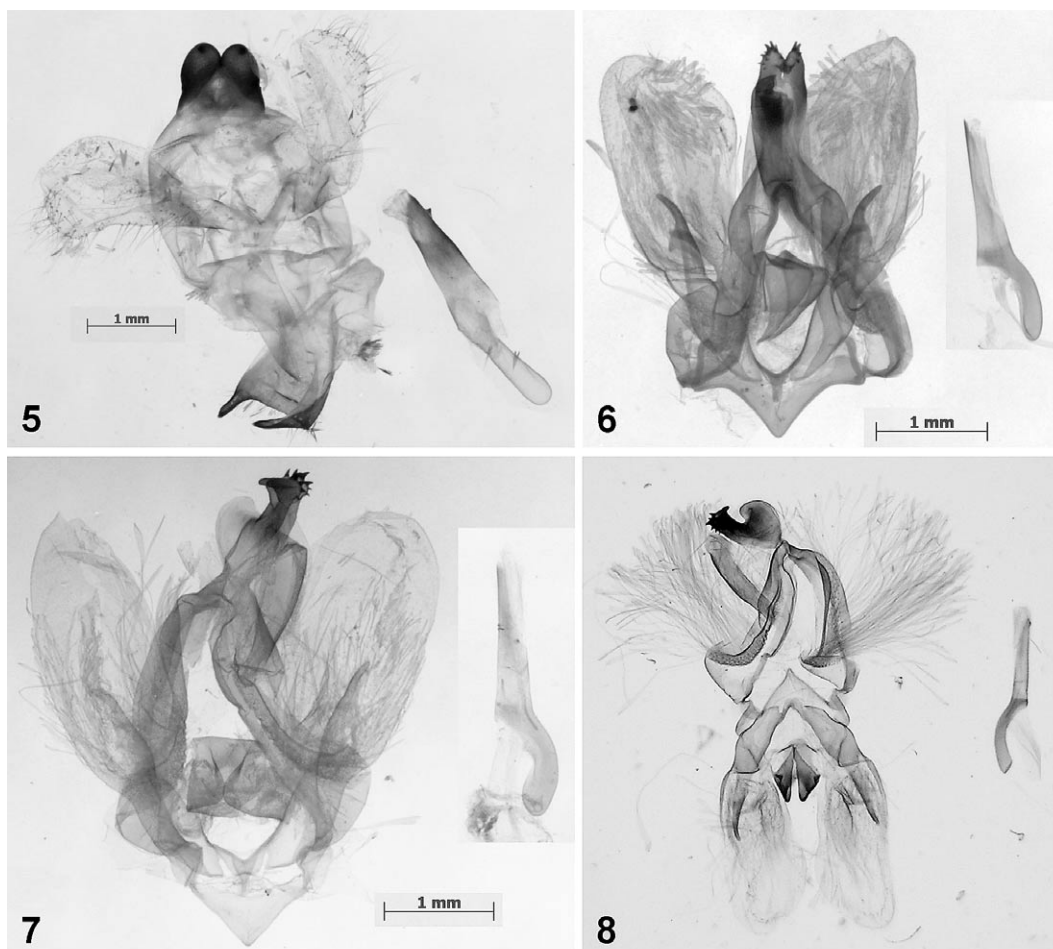
fig. 10. Type locality: Japan. Distribution: Japan, Korea.

Agrisius japonicus albida Daniel, 1952 (Figs 8, 12), **comb. nov., stat. rev.**; *Bonn. zool. Beitr.* **3** (3-4): 316-317, **3** (1-2): pl. 2, fig. 54 (*Agrisius fuliginosus albida*). Type locality: Kiangsu: Lungtan bei Nanking ... Chekiang: Ost-Tien-Mu-Shan, 1500 m [China, Jiangsu and Zhejiang]. Holotype – male. Distribution: East China.

Agrisius dubatolovi Orhant, 2012; *Bull. Soc. ent. Mulhouse* **68** (3): 37-38, figs 4-6. Type locality: Thaïlande, Kanchanaburi, Song Toh Mine, 831 m. Holotype – male. Distribution: South (Guangdong, Hainan) and South-West China (Yunnan?), Indochina (Vietnam, Thailand, probably Laos).

Remarks. The species group is characterized by a complex uncus consisting of a naked crest and a broad apical sclerotized process dorsally covered with two rows of spines; membranous oval valves without any sclerotize processes; and narrow aedeagus without spines or pricks (Figs 6-8). *A. j. albida* Daniel from China has no noticeable differences from the nominotypical *A. japonicus* Leech from Japan, except for the different wing coloration, greyish in *A. japonicus* Leech and whitish in *A. j. albida* Daniel. *A. dubatolovi* Orhant might be another dark-winged subspecies of *A. japonicus* Leech, but with brownish coloration, so being more dark yet than the nominotypical subspecies.

Three additional names were attributed to *Agrisius*. *A. plumbeonigra* Swinhoe, 1916 (*Ann. Mag. nat. Hist.* (8) **18**: 485) from Khasi Hills in Meghalaya, India; this name is probably a synonym of *Baroa punctivaga* (Walker, 1855). Sclater (1931) in Zoological Record and later LepIndex (<http://www.nhm.ac.uk/research-curation/research/projects/lepindex/>) cited two names in *Agrisius* that were described as *A. griseilinea* de Joannis, 1930; *Ann. Soc. Ent. Fr.* **98**: 756-757, and *A. strigibasis* de



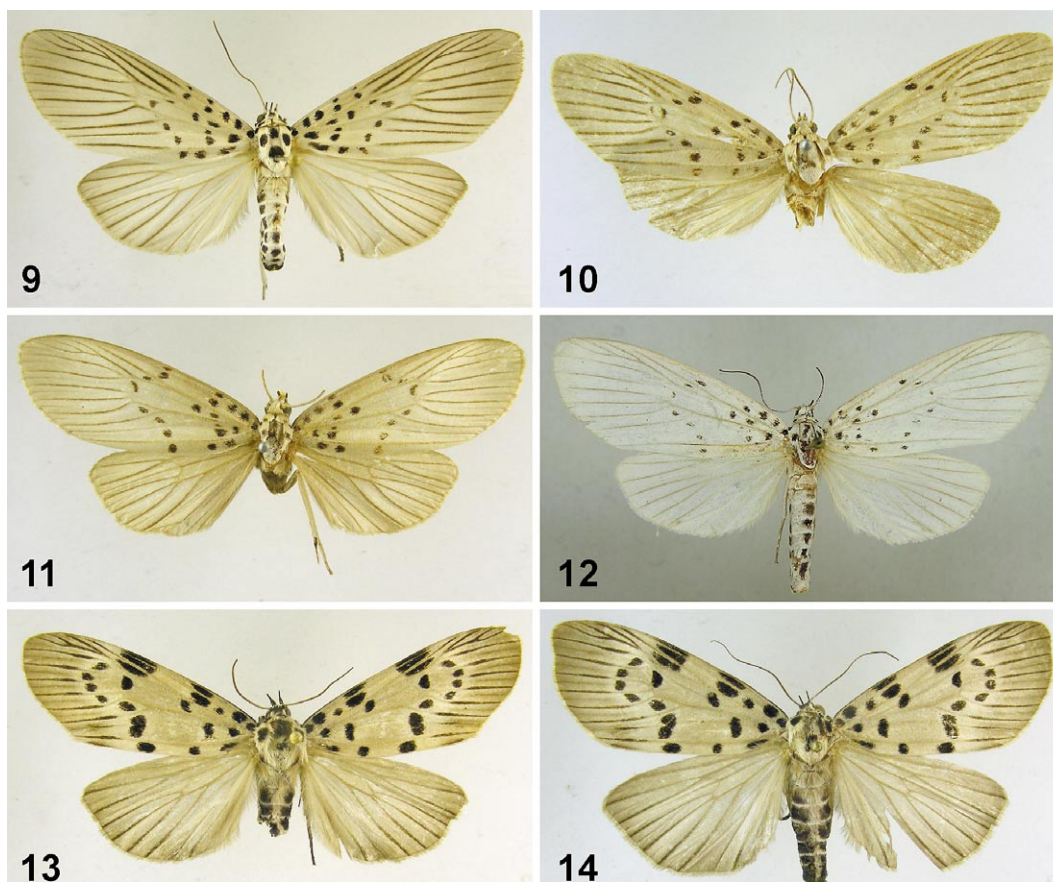
Figs 5-8. *Agrisius* male genitalia of the *Fuliginosus* and *Japonicus* Species Groups. 5. *A. fuliginosus* Moore, Nepal, Kathmandu, Godavari. 6. *A. japonicus* Leech, Japan, Saga, Takumachi. 7. *A. japonicus* Leech, Republic of Korea, Shin heung sa near Mt. Solak. 8. *A. japonicus albida* Daniel, paratype, China, Jiangsu, Lungtan near Nanking.

Joannis, 1930; *Ann. Soc. ent. Fr.* **98**: 757-758, both from Cha pa (=Sa Pa), North Vietnam. However, such combinations are mistakes, because these names were described in different genera. The former has a mistake in the genus name abbreviation and should be read as *Cyana*, the second one was described in *Asura*.

After studying several tens of *Agrisius* specimens from a private collection by Kishida, a new species of the genus *Agrisius* from the *Guttivitta* Species Group have been designated, its description is given below.

***Agrisius excellens* Dubatolov et Kishida, sp. nov.** (Figs 13-14)

Material. Holotype – ♂, Laos, Sam Neua Phu Pan, 1,750 m, 15-17.x.2005, Mamoru Owada leg. Preserved in a collection of National Science Museum, Tokyo, Japan. Paratype: 1 ♀, same data as in the holotype.



Figs 9-14. Moths of the genus *Agrisius*. 9. *A. fuliginosus* Moore, Nepal, Kathmandu, Godavari. 10. *A. japonicus* Leech, Japan, Saga, Takumachi. 11. *A. japonicus* Leech, Republic of Korea, Shin heung sa near Mt. Solak. 12. *A. j. albida* Daniel, paratype, China, Jiangsu, Lungtan near Nanking. 13-14. *A. excellens* sp. nov., Laos, Sam Neua Phu Pan. 13: holotype, male; 14: paratype, female.

Description. Forewing length 26 mm in male and female. Male forewing elongated towards apex; brown with series and rows of dark brown spots. Forewing base with one small spot; subbasal row consists of three spots, the costal one being the largest. One additional small spot is situated on radial vein between subbasal and antemedial rows. Antemedial row consists of two larger longitudinally elongated spots at costal margin, oval spot in cell, one transversally elongated spot beyond cell and a round spot at wing hind margin. Discal spot semicircular. Postmedial row consists of three strokes between costal margin and discal spot, 4 round spots distally from discal spot and three larger spots between discal vein and hind margin. In forewing outer part, veins dark brown, alternating with less darker strokes between veins. Hindwings light brown with darker veins at outer part of the wing.

Female has forewings not elongated towards apex but the wing pattern is similar.

Male genitalia (Fig. 15). Uncus consisting of two parallel branches tapering to tips. Valve membranose, formed mainly by cucullus that is significantly broadening distally. Its apical part covered with long hairs that are longer and denser at apical ventral part. Sacculus three times shorter than cucullus, consists of two sclerotized branches; one of them straight, slightly curved at tip, another short, broad and curved. Juxta short, v-shaped. Saccus triangular. Aedeagus short, stout, with a sclerotized plate covered with longitudinal ribs.

Remarks. The new species differs from all other species of the genus by large dark spots on

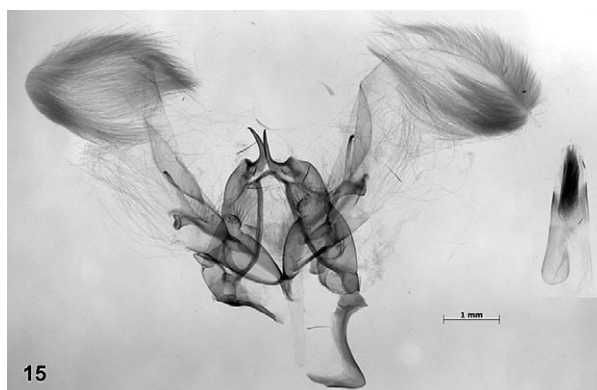


Fig. 15. Male genitalia of *Agrisius excellens* sp. nov., holotype, Laos, Sam Neua Phu Pan.

forewings and presence of three longitudinal strokes of the postdiscal spot row at the costa. The male genitalia have noticeable characters of the *Guttivitta* species group: the two branches of the uncus, the sacculus consisting of two branches also; however these branches are very small. Valve length is the largest in the group, it is larger than the diameter of a the vinculum-tegumen ring. The presence of a ribbed sclerotized plate in aedeagus also differentiates the new species from all others in the genus.

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