

***Spilaethalida*, a new genus for the New Guinean and Australian  
*Spilarctia turbida* complex (Lepidoptera, Arctiidae)*****Spilaethalida*, новый род для новогвинейско-австралийского  
комплекса видов *Spilarctia turbida* (Lepidoptera, Arctiidae)**V.V. Dubatolov\*, R. de Vos\*\*, D. Daawia\*\*\*  
В.В. Дубатов\*, Р. де Вос\*\*, Д. Давиа\*\*\*

\*Siberian Zoological Museum, Institute of Systematics and Ecology of Animals, Siberian Branch of Russian Academy of Sciences, Frunze str. 11, Novosibirsk 630091 Russia. E-mail: vvdubat@online.nsk.su.

\*\*Сибирский зоологический музей Института систематики и экологии животных СО РАН, ул. Фрунзе 11, Новосибирск 630091 Россия.

\*\* Zoölogisch Museum Amsterdam, afd. Entomologie, Plantage Middenlaan 64, Amsterdam NL-1018 DH Netherlands.

\*\*\* Universitas Cenderawasih, Jurusan Biologi (FMIPA), Kampus Baru Waena, Jayapura, Papua Indonesia.

**Key words:** Arctiidae, tiger-moths, new genus, New Guinea, Australia, *Spilarctia*, *turbida*, *meekei*, *erythrastis*.**Ключевые слова:** Arctiidae, медведицы, новый род, Новая Гвинея, Австралия, *Spilarctia*, *turbida*, *meekei*, *erythrastis*.

**Abstract.** Based on the male genitalia structure, a new genus, *Spilaethalida* Dubatolov, de Vos et Daawia, **gen.n.**, is described with type species *Spilarctia turbida* Butler, 1882 (= *S. meeki* Druce, 1899) from New Guinea and adjacent eastern islands. *Spilosoma erythrastis* Meyrick, 1855 from North-Eastern Australia is also transferred to the new genus.

**Резюме.** На основании различий в строении генитального аппарата самцов описывается новый род *Spilaethalida* Dubatolov, de Vos et Daawia, **gen.n.** с типовым видом *Spilarctia turbida* Butler, 1882 (= *S. meeki* Druce, 1899) из Новой Гвинеи и сопредельных восточных островов. В новый род также отнесён *Spilosoma erythrastis* Meyrick, 1855 из Северо-Восточной Австралии.

After study of the male genitalia of the Sundanian tiger-moths, it was observed that *Spilarctia meeki* Druce, 1899, which is now treated as a subspecies of *Spilarctia turbida* Butler, 1882 from New Guinea, has quite different male genitalia from the Palearctic, Oriental and other New Guinean species of the heterogeneous genus *Spilarctia*. The description of the new genus is given below.

***Spilaethalida* Dubatolov,  
de Vos et Daawia, **gen.n.****  
Plates VII: 1–4.

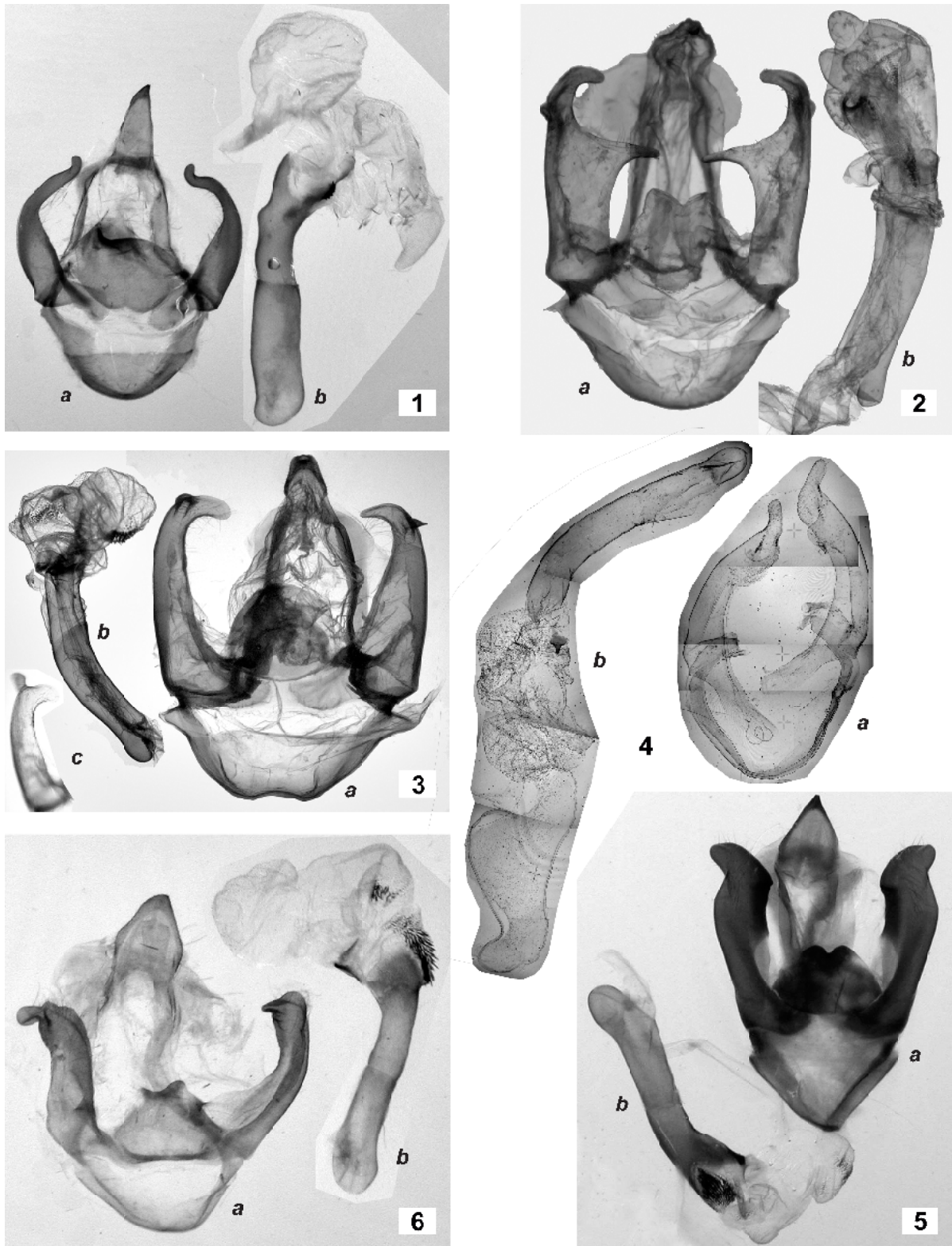
Type species: *Spilarctia turbida* Butler, 1882

**Description.** Male antennae slightly pectinate. Palpi porrect, stout, not longer than dense hairs on face. Eyes large, hemispherical, naked. Fore tibiae simple, with an epiphysys nearly reaching the tibia apex. Middle tibia with single pair, hind one with two pairs of small stout spurs. Claws with a small parallel tooth at base. Forewing vein  $R_2$  arises from the stem  $R_{3+5}$ . Forewings light with rows of black spots

grouping into 5–6 rows. Postdiscal band extends around the bifurcation of the  $Cu_1-M_3$  veins, which is highlighted by a pale spot that is sometimes lighter than the background. Forewing veins tend to be lighter than the background. Hindwings with one or two rows of large black spots or bands between the discal spot and the wing margin. Tegulae and patagiae dark with light margins. Tympanum with small flattened projections.

Male genitalia (Fig. 1) provide the main diagnostic characters of the genus, which are: the simple valva without any additional processes, «S»-shaped and narrowing towards rounded apex; juxta is transverse, trapezium-shaped; uncus elongate, its base set in a more or less upturned «collar» formed from the tegumen; aedeagus slightly curved with a sclerotized apical protrusion covered with small spines; vesica divided into two lobes opposite each other.

**Remarks.** Species of the new genus resemble in wing pattern the *Spilarctia*-like New Guinean species related to *Spilarctia dinawa* (Bethune-Baker, 1904) (Pl. VII: 5) and *S. arctichroa* (Druce, 1909) (Pl. VII: 6). However, the male genitalia of both groups are quite different: these other species (Figs 2–3) have true *Spilarctia*-like valva structures with three or two separate processes, while valva of *Spilaethalida* are simple without any additional process. Such valva structures are typical in *Aethalida* Walker, [1865] species [Dubatolov, Kishida, 2005b] from neighboring Wallacea; but species of the latter genus bear more or less broad lateral lobes on both vinculum sides; such lobes are absent from *Spilaethalida*. Slightly similar valva structures are present in *Rhodareas* Kirby, 1892 from Sri Lanka (Ceylon), with the type species *Arctia melanopsis* Walker, [1865] (Fig. 4), and two species from China, which are probably related to *Rhodareas*: *Spilarctia alba* (Bremer et Grey, 1852) [Dubatolov, Kishida, 2005a] and *S. bipunctata* Daniel, 1943, **stat.n., rev.** (Figs 5–6). These three species have a strongly curved valva apex with rudiments of additional processes; *Spilaethalida* lacks any such rudiments.



Figs 1–6. Male genitalia of the *Spilaethalida* and similar species: habitus (a), aedeagus (b), pressed valva (c). 1 — *Spilaethalida turbida meeki* (Druce), Trobriand Island; 2 — *Spilarctia dinawa* (Bethune-Baker), New Guinea, Dinawa; 3 — *Spilarctia arctichroa* (Druce), New Guinea, Irian Jaya, Birdshead Peninsula, Tuan Wowi (near Andai); 4 — *Rhodareas melanopsis* (Walker), Ceylon (Sri Lanka); 5 — *Spilarctia alba* (Bremer et Grey), China, East Yunnan; 6 — *Spilarctia bipunctata* (Daniel), China, Shaanxi.

Рис. 1–6. Гениталии самцов *Spilaethalida* и сходных видов: общий вид (а), эдеагус (б), сдавленная вальва (с). 1 — *Spilaethalida turbida meeki* (Друсе), о-в Тробриан; 2 — *Spilarctia dinawa* (Бетхун-Бейкер), Новая Гвинея, Динава; 3 — *Spilarctia arctichroa* (Друсе), Новая Гвинея, Ириан Джая, п-ов Птичья Голова, Туан Вови (около Андай); 4 — *Rhodareas melanopsis* (Уолкер), Цейлон (Шри Ланка); 5 — *Spilarctia alba* (Бреммер и Грей), Китай, Восточная Юньнань; 6 — *Spilarctia bipunctata* (Даниел), Китай, Шэньси.

*Spilaethalida turbida* (Butler, 1882), **comb.n.**

Plates VII: 1–2.

*Spilarctia turbida* Butler, 1882: Ann. Mag. Nat. Hist. (5) **10**: 158–159; type locality: «Duke-of-York Island».

= *Spilarctia meeki* Druce, 1899: Ann. Mag. Nat. Hist. (7) **3**: 234; type locality: «Trobriand Island, Kiriwini».

= *D.[iacrisia] turbida montana* Rothschild, 1910: Novit. Zool. **17** (2): 145; **18**: t. 3, f. 10, t. 4, fig. 19; type locality: «Angabunga River, affluent of St. Joseph's River, 6000 ft. upwards, ... Upper Aroa River, ... Aroa River, British New Guinea».

= *Diacrisia turbida alpina* Rothschild, 1914 in: Seitz, Gross-Schmett. Erde **10**: 247, f. 23a, b (nom. nov. pro *montana* Rothschild).

= *D.[iacrisia] turbida woodlarkiana* Rothschild, 1910: Novit. Zool. **17** (2): 145; **18**: t. 4, f. 29; type locality: «Woodlark Island».

= *D.[iacrisia] turbida sordidior* Rothschild, 1910: Novit. Zool. **17** (2): 146; type locality: «Fergusson and Goodenough Islands, D» Entrecasteaux Islands ... Milne Bay, South-East British New Guinea, ... Kumasi River, North-East British New Guinea, ... Biagi, Mambare River, North-East British New Guinea, 5000 ft., ... Sattelberg, German New Guinea».

**Distribution.** New Guinea and adjacent islands. A review of subspecies will be published later.

**Material.** 1♂, Kiriwini, Trobriand Is., IV. 15, A.S. Meek (Manchester Museum, University of Manchester); 1♂, «Nederlands Nieuw Guinea, Hollandia», VI.1958, G. den Hoed (Zoölogisch Museum Amsterdam). Many specimens, including all types in BMNH, have been studied, but we have restricted this list to dissected specimens only.

*Spilaethalida erythrastis* (Meyrick, 1886), **comb.n.**

Plates VII: 3–4.

*Spil.[osoma] erythrastis* Meyrick, 1886: Proc. Linn. Soc. N.S. Wales (2) **1**: 753–754; type locality: «Lizard Island, off Cape Flattery, Queensland».

= *Spilosomia frenchii* Th.P. Lucas, 1898: Proc. Soc. Queensland **13**: 59–60; type locality: «Northern Queensland». Synonymized by Hampson [1901].

**Remarks.** Placement of this species in the new genus is only tentative, as we have not been able to study the male genitalia. Nevertheless, taking into account wing pattern, which is very similar to the type species in the presence of the separate rows of black spots on the forewing as well as a pale spot at the bifurcation of the  $Cu_1-M_3$  veins. It differs only in the presence of a different subbasal spot row on forewings (which is replaced by a single large spot in the type species) and by the presence of a narrow black postdiscal band on the hindwings, which is absent in the type species.

**Distribution.** North-Eastern Australia: Queensland.

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Russia) and Dr. V. Kovtunovich (Moscow, Russia) for a photograph of the male genitalia of *Rhodareas melanopsis*, which was prepared in the BMNH, and Mr. M.R. Honey for much help with studying of type material in the BMNH collection. Special thanks to Dr. Jeremy Holloway (London, U.K.) for correcting the English of the manuscript and to Dr. R. Yu. Dudko (Novosibirsk, Russia) for computer correcting of some digital photographs of male genitalia.

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## Вклейка V ❖ Plate V

С.Э. Чернышев. С. 337–341. Вклейка V. *Ebaeus* spp., габитус самцов (1, 3, 5) и самок (2, 4), фотографии типового места (6–8): 1–2 — *E. adyri* sp.n. — голотип (1) и аллотип (2); 3–5 — *E. zinchenkorum* sp.n. — голотип (3), аллотип (4) и паратип (5); 6–8 — типичные виды «Пылающих адыров». 5–8 — фото Ю.К. Зинченко.

S.E. Tshernyshev. P. 337–341. Plate V. *Ebaeus* spp., habitus of males (1, 3, 5) and females (2, 4), photos of terra typica (6–8): 1–2 — *E. adyri* sp.n. — holotype (1) and allotype (2); 3–5 — *E. zinchenkorum* sp.n. — holotype (3), allotype (4) and paratype (5); 6–8 — typical sites of «Burning adyrs». 5–8 — photo by Yu.K. Zinchenko.

## Вклейка VI ❖ Plate VI

Г.Р. Леднёв и др. С. 253–254. Вклейка VI: 1–4. *Cordyceps militaris*, общий вид стромы гриба в куколках бабочек, обнаруженных в Приморье (Лазовский заповедник) (1–3) и в Новосибирской области (4).

G.R. Lednev et al. P. 253–254. Plate VI: 1–4. Stroma of *Cordyceps militaris* in moths pupa found in Primorie, Laso State Reservation (1–3) and Novosibirsk Oblast' (4).

Т.В. Гордеева. С. 327–336. Вклейка VI: 5–8. *Ive 1a ochropoda* на ильмовнике *Ulmus pumila* в Забайкалье: 5 — отмирание части кроны вследствие массового размножения гусениц в Бурятии, 6 — гусеница III возраста (Бурятия, падь Интигринова, по ручью Онохой-Шибирь, 20.08.2005), 7 — гусеница VII возраста (там же, 12.06.2003), 8 — гусеница VIII возраста (там же, 12.06.2003).

T.V. Gordeeva. P. 327–336. Plate VI: 5–8. *Ive 1a ochropoda* on *Ulmus pumila* in Transbaikalia: 5 — tree crown decease after mass appearance of caterpillars in Buryatia, 6 — caterpillar of III age (Buryatia, pad' Intigrinova, Onohoi-Shibir' spring, 20.08.2005), 7 — caterpillar of VII age (idem, 12.06.2003), 8 — caterpillar of VIII age (idem, 12.06.2003).

## Вклейка VII ❖ Plate VII

V.V. Dubatolov et al. P. 324–326. Plate VII: 1–6. The *Spilaethalida* and similar species, moth images, upperside: 1–2 — *Spilaethalida turbida meeki* (Druce), Trobriand Island, Kiriwini; 3–4 — *Spilaethalida erythrastris* (Meyrick), Australia, Queensland (BMNH); 5 — *Spilarctia dinawa* (Bethune-Baker), New Guinea, Dinawa (BMNH); 6 — *Spilarctia arctichroa* (Druce), New Guinea, Waris District, Ampas (ZMAN); 1, 3, 5–6 — males, 2, 4 — females; 2, 5 — holotypes.

V.V. Дубатов и др. С. 324–326. Вклейка VII: 1–6. *Spilaethalida* и близкие виды, изображения бабочек, верхняя сторона: 1–2 — *Spilaethalida turbida meeki* (Друсе), о-в Тробриан, Киривини; 3–4 — *Spilaethalida erythrastris* (Мейрик), Австралия, Квинсленд (Британский музей); 5 — *Spilarctia dinawa* (Бетхун-Бейкер), Новая Гвинея, Динава (Британский музей); 6 — *Spilarctia arctichroa* (Друсе), Новая Гвинея, район Варис, Ампас (Зоологический музей, Амстердам, Голландия); 1, 3, 5–6 — самцы, 2, 4 — самки; 2, 5 — голотипы.

Д.А. Милько, В.Л. Казенас. С. 271–272. Вклейка VII: 7. *Scolia sinensis* ♀, Казахстан, окрестности Алматы, 18.08.2007. Фото В.Л. Казенаса.

D.A. Milko, V.L. Kazenas. P. 271–272. Plate VII: 7. *Scolia sinensis* ♀, Kazakhstan, near Almaty, 18.08.2007. Photo by V.L. Kazenas.

## Вклейка VIII ❖ Plate VIII

А.В. Баркалов. С. 273–298. Вклейка VIII: 1–4. *Dasyrphus* spp., голотипы (1–3) и паратип, ♀ (4): 1 — *D. lapidosus*, 2 — *D. pauxillus difficilis* ssp.n., 3 — *D. shiloi* sp.n., 4 — *D. kegalii*. a — габитусы, b — головы спереди. Масштабные линейки 2 мм.

A.V. Barkalov. P. 273–298. Plate VIII: 1–4. *Dasyrphus* spp., holotypes (1–3) and paratype (4): 1 — *D. lapidosus*, 2 — *D. pauxillus difficilis* ssp.n., 3 — *D. shiloi* sp.n., 4 — *D. kegalii*. a — habiti, b — heads frontally. Scale bars 2 mm.

Ю.Е. Михайлов. С. 255–264. Вклейка VIII: 5–8. *Chrysolina* spp., габитусы: 5–6 — *C. mordkovitshi* sp.n.: голотип (5), паратип, самка (6); 7 — *C. novozhenovi* sp.n., голотип; 8 — *C. gebleri*, самец, Алтай: плато Укок.

Yu.E. Mikhailov. P. 255–264. Plate VIII: 5–8. *Chrysolina* spp., habiti: 5–6 — *C. mordkovitshi* sp.n.: holotype (5), paratype, female (6); 7 — *C. novozhenovi* sp.n., holotype; 8 — *C. gebleri*, male, Altai: Ukok upland.



