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Review of the *Spilarctia hypogopa* group, with descriptions of a new species and two new subspecies

(Lepidoptera, Arctiidae)

by

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Abstract: The *Spilarctia hypogopa* (HAMPSON, 1907) group of species is related to *S. postrubida* (WILEMAN, 1910) but differs by presence of two (not three) cornuti patches on a everted vesica. It consists of the nominotypical species from Malakka, Sumatra and Borneo which is characterised by yellow hindwings, a new *S. hypogopa* ***mentawaica*** DUBATOLOV **subspec. nov.** from Suberut with a short apical valva processus, *S. moorei* (SNELLEN, 1879) from Sulawesi with a rose-coloured anal lobe to the hindwings, and a new species *S.* ***philippina*** DUBATOLOV & KISHIDA **spec. nov.** from Philippines, with rose hindwings. *S. philippina* ***mindanaoica*** DUBATOLOV & KISHIDA **subspec. nov.** from Mindanao differs from the nominotypical subspecies from Negros by more pronounced black markings on the forewings.

Zusammenfassung: Die *Spilarctia hypogopa* (HAMPSON, 1907)-Artengruppen steht der *S. postrubida* (WILEMAN, 1910) nahe, unterscheidet sich aber von dieser durch zwei (nicht drei) Cornuti-Felder auf der evertierten Vesica.Diese Artengruppe besteht aus der namenstypischen Art von Malakka, Sumatra und Borneo, die durch die gelben Hinterflügel charakterisiert ist; die neue *S. hypogopa* ***mentawaica*** DUBATOLOV **subspec. nov.** von Suberut besitzt einen kurzen Fortsatz am Apex der Valve, die S. moorei (SNELLEN, 1879) von Sulawesi einen roséfarbigen Wisch am Innenrand der Hinterflügel und die neue *S.* ***philippina*** DUBATOLOV & KISHIDA **spec. nov.**, von den Philippinen, ganz roséfarbige Hinterflügel. *S. philippina* ***mindanaoica*** DUBATOLOV & KISHIDA **subspec. nov.** fvon Mindana unterscheidet sich von der namenstypischen Unterart aus Negros durch die betonteren schwarzen Flecken aud den Vorderflügeln.

Spilarctia hypogopa (HAMPSON, 1907) was described from Singapore and recorded from the Peninsular Malaysia, Sumatra and Borneo (HOLLOWAY, 1988). It is closely related to *S. postrubida* (WILEMAN, 1910), which is distributed from the Ryukyu Is. and Taiwan (the type locality), and throughout South China: Hainan (Fang, 2000) and North Vietnam to Nepal, but is cited as *S. subcarnea* WLK. (KISHIDA, 1995). These two species are similar, sharing a dark longitudinal stripe on the thorax, a narrow triangular uncus, elongate valvae with a single triangular enlargening on its ventral edge, with no processes or enlargement to its dorsal edge, and by the presence of an apical ventral sclerotisation on the aedeagus bearing a strong spine; the latter character is common within the *S. strigatula* (WALKER, 1855) group. *S. hypogopa* (HMPS.) is separated from *S. postrubida* (WIL.) by the presence of two (not three) cornuti groups on the vesica. During an examination of *S. hypogopa*-like specimens from the Pacific islands in KISHIDA's collection, several new taxa were discovered that motivated us to prepare a review of the *S. hypogopa* (HMPS.) group.

Spilarctia hypogopa hypogopa (HAMPSON, 1907) (colour plate 7, figs. 1-4)
Diacrisia hypogopa HAMPSON, 1907, Ann. Mag. Nat. Hist. (7) 19: 235-236; type locality: "Singapore"; figured by HAMPSON (1920), Cat. Lep. Phal. Brit. Mus. Suppl. to Vol. 2: 390-391, pl. LIX, fig. 12.
HOLLOWAY (1988), Moths of Borneo 6: 46-47, pl. 3, fig. 84, 143.

Material. Indonesia: 3 ♂♂ West Sumatra, Harau valley, h=700 m, V.2004, native collector leg. (SZMN); Malaysia: 1 ♂, Borneo, Sarawak, G. Serapi, 29.IV.1990 (YK).
Distribution. Malakka Peninsula, Singapore, Sumatra, Borneo.

Diagnosis. Forewing length 18-22 mm, wing expanse 39-47 mm. The species is characterised by yellowish hindwings without a rose-coloured tint and by an absence of red suffusion on the forewing underside; the forewing upperside pattern varies significantly in the number of black spots, but the structure the ♂ genitalia is constsnt (HOLLOWAY, 1988).

♂ genitalia (Fig. 1). Valvae with a long apical processus, more than half as long as the rest of the valva. The narrowest part of the valva is close to the ventral enlargement, where it is less than twice the width of the apical processus.

Spilarctia hypogopa m e n t a w a i c a DUBATOLOV **subspec. nov.** (colour plate 7, figs. 5-6)
Material. Holotype ♂, Indonesia, Mentawai isls., Siberut isl., Bojakan, IX.2004, native collector leg. Deposited in the Siberian Zoological Museum of the Institute of Animal Systematics and Ecology, Novosibirsk, Russia. Paratype: 1 ♂, the same label.

Description. Forewing length 17-20 mm, wing expanse 36-42 mm. The wing pattern is similiar to light coulored specimens of the nominative subspecies. Forewing upperside yellow with a slight greyish tint, with two black spots on the costa situated a quater of the way from the base and a third from apex. There are traces of an oblique row of black spots running from the middle part of the hind margin towards the bifurcation of veins M_3-Cu_1, as well as traces of pairs of dots along the veins in the submarginal area. Hindwing upperside yellow, darker along the anal margin, with greyish spots on the discal vein together with a few submarginal ones.

♂ genitalia (fig. 2). Apical valva processus short, less than a third of the length of the rest of the valva; this processus is noticeably curved inwards. Valva very narrow, less than twice the width of the apical processus - the narrowest part being close to the ventral enlargement.

Remarks. The new subspecies looks like light-coloured specimens of *S. hypogopa* HMPS. collected from open and disturbed areas (HOLLOWAY, 1988), but differs noticeably by a very short apical valva processus.

Spilarctia moorei (SNELLEN, 1879) (colour plate 7, figs. 7, 8; colour plate 8, figs. 9, 10)
[*Spilosoma sanguinalis*] Moorei SNELLEN, 1879; Tijdskr. Ent. 22: 100-101 (40-41 in separate issue), pl. 8, fig. 3 (*sanguinalis*); type locality: "Celebes", "Overal waar verzameld." [From everywhere it was collected.]
Spilarctia snelleni KIRBY, 1892; Syn. Cat. Lep. Het. 1: 231, nom. nov. pro *Spilosoma sanguinalis* SNELLEN, 1879.

Material. Indonesia: 1 ♂ (syntype of *moorei* SNELL.), "Celebes, Lokka; 4/8 1900 geleend aan HAMPSON" [Sulawesi, Lokka, 4th August 1900 borrowed to HAMPSON] (National Natural History Museum (Naturalis) in Leiden); 1 ♂, Sulawesi, Rantepao, Tondok-Litak, 17.VIII.1984, N. KASHIWAI leg. (YK).
Diagnosis. Forewing length 21.5 mm, wing expanse 42.5 mm. Forewing upperside similar to dark specimens of *S. hypogopa* HMPS. but the hindwings are yellow with a rose-coloured tint, especially at the anal lobe. Forewing underside with a strong red tint in the basal and middle sections. All these characters are clearly visible on the figure accompanying the original description but are less so in the old syntype.

♂ genitalia (fig. 3). Similar to *S. hypogopa* HMPS. but valvae robust, ventral triangular enlargement located in the middle part of the valva, and the largest cornuti patch is elongated in shape, not oval. Valva narrow, the narrowest part being close to the ventral enlargement and less than twice the width of the apical processus.

Spilarctia philippina DUBATOLOV & KISHIDA **spec. nov.** (colour plate 8, figs. 11-12)
Material. Holotype ♂, Philippines, Negros I., Mt. Canlaon, IX.1997, native collector leg. Deposited in National Science Museum, Tokyo, Japan. Paratypes: 2 ♂♂, same locality (SZMN).

Description. Forewing length 21.5-22 mm, wing expanse 42-43 mm. Forewings yellow with a noticeable grey suffusion. Black pattern reduced: there are two pairs of black spots located along vein A at the middle of the hind margin; traces of an obligue grey band are just visible running from the distal pair of spots towards the apex of the wing, but only to vein M_3. Submarginal wing area with two neighbouring dashes between M_1 and M_3. Forewing veins slightly lighter than the ground colour. Hindwing rose-coloured, with black spots on the discal vein and three at the submargin, those between veins M_1-M_3 and along Cu_2 crossed by veins. Forewing underside like the upperside but with a strong red suffusion in the basal and middle part of the wing; spots along vein A missing. Hindwing underside yellow, with the same spots as on the upperside.

♂ genitalia (fig. 4). Valva elongated but wider than in *S. hypogopa* HMPS., its width at the narrowest part being close to the ventral enlargement, is wider than in the two former species, three times or more than the width of the apical processus. Apical valva processus long, sometimes slightly bent outwards, and about two thirds the length of the rest of the valva.

Spilarctia philippina mindanaoica DUBATOLOV & KISHIDA **subspec. nov.**
(colour plate 8, figs. 13-16)
Material. Holotype ♂, Philippines, Mindanao I., Mt. Busa, 11-18.VI.1997, native collector leg. (YK). Deposited in National Science Museum, Tokyo, Japan. Paratypes: 1 ♂, same locality (YK).

Description. Forewing length 24 mm, wing expanse 42 mm. Forewing ground colour yellowish with a strong grey suffusion, veins lighter. Forewing pattern very similar to dark

specimens of *S. hypogopa* HMPS. Hindwing upperside rose-coloured with a yellowish tint in the holotype, yellowish with a rose tint in the paratype. There are several dark spots, one discal and three at the submargin; in addition there is a blackish streak from the Cu_1-M_3 bifurcation to the basal third of Cu_2. Forewing underside with a strong red suffusion in the basal area and in the middle part of the wing, the black spots being comparatively less pronounced.

♂ genitalia (fig. 5). We have not found any significant distinguishing characters in the ♂ genitalia between either subspecies of *S. philippina* **spec. nov.**

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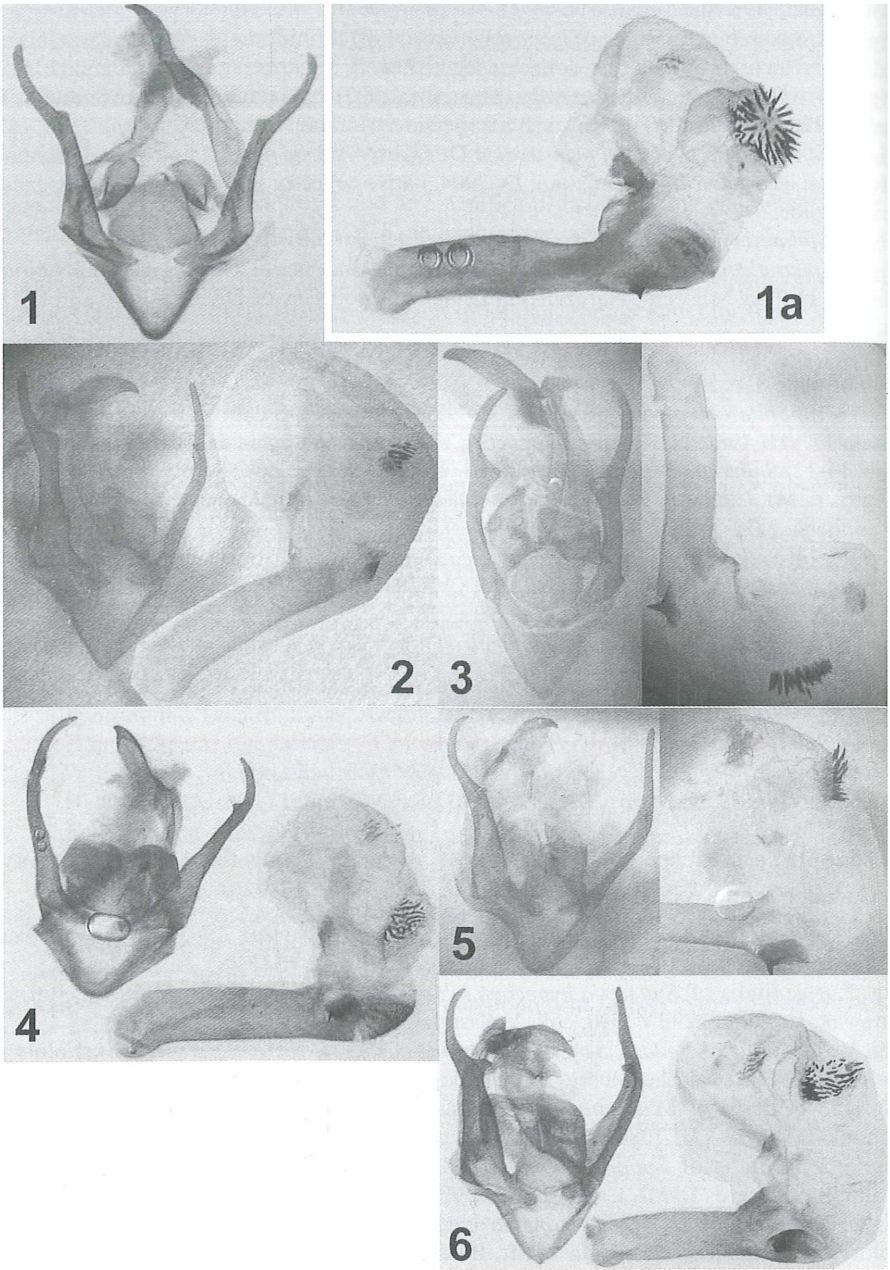
Colour plate 7, p. 508
Figs. 1-2: *Spilarctia hypogopa hypogopa* (HAMPSON, 1907) ♂, Indonesia, West Sumatra, Harau valley, h=700 m, V.2004, native collector leg. (SZMN); 1 – upperside, 2 – underside.
Figs. 3-4: *Spilarctia hypogpa hypogopa* (HAMPSON, 1907) ♂, Malaysia, Borneo, Sarawak, G. Serapi, 29.IV.1990, coll. Y. KISHIDA; 3 – upperside, 4 – underside.
Figs. 5-6: *Spilarctia hypogopa mentawaica* DUBATOLOV **subsp. nov.**, ♂, holotype, Indonesia, Mentawai isls., Siberut isl., Bojakan, IX.2004, native collector leg. (SZMN); 5– upperside, 6: underside.
Fig. 7: *Spilarctia moorei* (SNELLEN, 1879) ♂, figure from the original description.
Fig. 8: *Spilarctia moorei* (SNELLEN, 1879) ♂, lectotype, [Indonesia], Celebes, Lokka [National Natural History Museum (Naturalis) in Leiden], by courtesy of Dr. J. DE JONG and Dr. R. DE VOS.

Colour plate 8, p. 509
Figs. 9-10: *Spilarctia moorei* (SNELLEN, 1879) ♂, Indonesia, Sulawesi, Rantepao, Tondok-Litak, 17 VIII.1984, N. KASHIWAI leg., coll. Y. KISHIDA; 9: upperside, 10: underside.
Figs. 11-12: *Spilarctia philippina* DUBATOLOV & KISHIDA **spec. nov.**, holotype ♂, Philippines, Negros I., Mt. Canlaon, IX.1997, native collector leg. (National Science Museum, Tokyo); 11: upperside, 12: underside.
Figs. 13-14: *Spilarctia philippina mindanaoica* DUBATOLOV & KISHIDA **subspec. nov.**, holotype ♂, Philippines, Mindanao I., Mt. Busa, 11-18.VI.1997, native collector leg. (National Science Museum, Tokyo); 13: upperside, 14: underside.
Figs. 15-16: *Spilarctia philippina mindanaoica* DUBATOLOV & KISHIDA **subspec. nov.**, paratype ♂, Philippines, Mindanao I., Mt. Busa, 11-18.VI.1997, native collector leg., coll. Y. KISHIDA; 15: upperside, 16: underside.

Explanation for the genital plate p. 398:

Fig. 1: ♂ genitalia of *Spilarctia hypogopa hypogopa* (HAMPSON, 1907), Indonesia, West Sumatra, Harau valley, 700 m, V.2004, native collector leg. (SZMN); 1a – aedeagus.
Fig. 2: ♂ genitalia of *Spilarctia hypogopa hypogopa* (HAMPSON, 1907), Malaysia, Borneo, Sarawak, G. Serapi, 29.IV.1990, coll. Y. KISHIDA.
Fig. 3: ♂ genitalia of *Spilarctia hypogopa mentawaica* DUBATOLOV & **subspec. nov.**, holotype, Indonesia, Mentawai isls., Siberut isl., Bojakan, IX.2004, native collector leg. (SZMN).
Fig. 4: ♂ genitalia of *Spilarctia moorei* (SNELLEN, 1879), Indonesia, Sulawesi, Rantepao, Tondok-Litak, 17.VIII.1984, N. KASHIWAI leg., coll. Y. KISHIDA.
Fig. 5: ♂ genitalia of *Spilarctia philippina* DUBATOLOV & KISHIDA **spec. nov**., holotype, Philippines, Negros I., Mt. Canlaon, IX.1997, native collector leg.
Fig. 6: ♂ genitalia of *Spilarctia philippina mindanaoica* DUBATOLOV & KISHIDA **subspec. nov.**, holotype, Philippines, Mindanao I., Mt. Busa, 11-18.VI.1997, native collector leg.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Farbtafel 1

PIATKOWSKI, H.-J.: Beitrag zur Erfassung der Noctuidae Griechenlands (Insecta: Lepidoptera). - Atalanta (2006) **37** (3/4): 345-392, Würzburg (Dezember 2006).

Abb. 1: Nordgriechenland: Der Kerkini-See (A), südwestliche Uferregion (70 m) im Strimonas-Flußtal, eingebettet zwischen dem Kerkini-Grenzgebirge (bis 2031 m) zu Bulgarien im Norden, dem Disoro-Gebirge (bis 767 m) im Westen und dem Mavrovouni-Gebirge (bis 1179 m) im Süden. Foto: 2.VII.1995. Fundort von u. a.: *Colobochyla salicalis* D. & S. (7), *Dysgonia torrida* GN. (35), *Heliothis maritima bulgarica* DRAUDT (137), *Pyrrhia umbra* HUFN. (142), *Eucarta amethystina* HBN. (185), *Cosmia pyralina* D. & S. (190).

Abb. 2: Nordgriechenland: Südwest-Ausläufer des Vermio-Gebirges östlich Kozani, Zentral-Makedonia, in der Nähe des Dorfes Kilada (D), 700 m. Foto: 10.V.2000. Fundort von u. a.: *Gonospileia triquetra* D. & S. (51), *Agrochola wautieri* DUFAY (197), *Agrochola osthelderi* BRSN. (199), *Episema glaucina* ESP. (203), *Episema lederi* CHRISTOPH (205), *Noctua orbona* HUFN. (288).

Abb. 3: Nordgriechenland: Östlicher Katara-Pass im Pindos-Gebirge, nordwestliches Thessalia, 30 km westlich Kalambaka. Blick über das Malakassiatiko-Flusstal auf einen Südhang mit dem Dorf Trigona (H), 750 m. Foto: 29.VI.1996. Fundort von u. a.: *Cryphia amygdalina* BRSN. (74), *Pyrrhia umbra* HUFN. (142), *Pyrrhia purpurina* ESP. (143), *Paradrina wullschlegeli schwingenschussi* BRSN. (156), *Eremodrina pertinax* STGR. (158), *Lithophane ledereri* STGR. (209), *Nonagria typhae* THNBG. (235), *Leucania herrichi* H.-S. (264), *Noctua janthe* BKH. (294), *Noctua haywardi* TAMS (297).

Abb. 4: Mittelgriechenland: Das Pargas-Gebirge (im Süden bis 927 m) erstreckt sich entlang der nördlichen Ipiros-Küste von Igoumenitsa über etwa 60 km bis Parga. Hier ein für die Umgebung Plataria typischer Süd-Osthang (J). Foto: 24.VI.1997. Fundort von u. a.: *Protodeltote pygarga* HUFN. (87), *Trichoplusia circumscripta* FRR. (103), *Spodoptera cilium* GN. (167), *Spodoptera littoralis* BSD. (168).

Abb. 5: Mittelgriechenland: Ionische Insel Lefkada, südliche Küstenregion bei Evgiros (IS-W), bis 450 m. Foto: 24. Mai 2000. Fundort von u. a.: *Nycteola siculana* FUCHS (57), *Spodoptera cilium latebrosa* LED. (167), *Spodoptera littoralis* BSD. (168).

Abb. 6: Mittelgriechenland: Halbinsel Pilion. Region östlich Visitsa (M), bis 650 m. Macchie mit u. a. *Spartium junceum* (Pfriemenginster), *Arbutus* (Erdbeerbaum) und *Cotinus coggygria* (Perückenstrauch). Foto: 18.V.1999. Fundort von u. a.: *Calophasia opalina* ESP. (118), *Xanthia aurago* D. & S. (194), *Dryobotodes tenebrosa* ESP. (213), *Nonagria typhae* THNBG. (235), *Noctua janthe* BKH. (294), *Noctua haywardi* TAMS (297). Fotos: PIATKOWSKI.

Farbtafel 1


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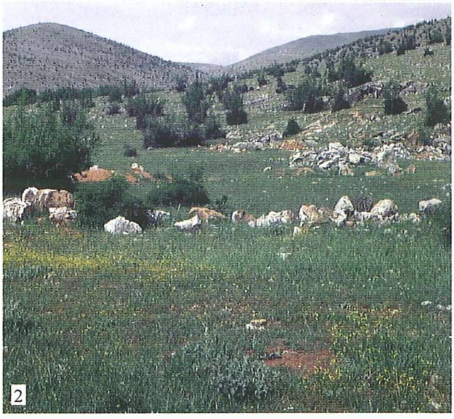
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Farbtafel 2

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Abb. 1: Mittelgriechenland: Das Kaliakouda-Gebirge (bis 2100 m), Umgebung Karpenissi, südlich Mega Hori (N). Foto: 27.V.1999. Fundort von u. a.: *Catocala promissa* D. & S. (19), *Cryphia amygdalina* BRSN. (74), *Polyphaenis subsericata* H.-S. (176), *Agrochola gratiosa* STGR. (200), *Apamea anceps* D. & S. (225), *Apamea sordens* HUFN. (226), *Lacanobia contigua* D. & S. (244), *Lacanobia suasa* D. & S. (245), *Noctua interposita* HBN. (289).

Abb. 2: Mittelgriechenland: Arahova (P), 1150 m, Parnassos-Südhang, Sterea Ellada. Foto: 19.IX.2001. Fundort von u. a.: Cryphia maeonis LED. (81), *Cornutiplusia circumflexa* L. (100), *Cucullia blattariae* ESP. (110) Raupen und Imagines, *Omphalophana antirrhinii* HBN. (118), *Spodoptera littoralis* BSD. (168), *Episema korsakovi* CHRISTOPH (206), *Leucania obsoleta* HBN. (262), *Ochropleura flammatra* D. & S. (284).

Abb. 3: Mittelgriechenland: Uferregion des Vouliakmeni-Sees (P), 0-30 m, am Kap Ireo, nordwestlich Korinthos und Loutraki. Foto: 7.VI.2005. Fundort von u. a.: *Lophoterges hoerhammeri* F. WAGNER (123).

Abb. 4: Südgriechenland: Dimitsana (S) im Zentral-Peloponnes westlich Tripoli (1000 m). Foto: 22.VII.2002. Fundort von u. a.: *Hadena filigrama* ESP. (255), *Hadena syriaca* OSTHLD. (258).

Abb. 5: Südgriechenland: Südöstliche Ausläufer des Lakonia-Gebirges im südöstlichen Peloponnes. Südhang mit *Euphorbia dendroides* nördlich Monemvasia (T). Foto: 22.V. 2003. Fundort von u. a.: *Ophiusa tirhaca* CR. (33), *Amephana dalmatica* RBL. (124).

Abb. 6: Südgriechenland: Halbinsel Mani in der Mitte des südlichen Peloponnes, Sangias-Gebirge (bis 1075 m), ein Ausläufer des Taigetos, Region südlich Vathia (T). Foto: 25.V.2003. Fundort von u. a.: *Ophiusa tirhaca* CR. (33), *Prodotis stolida* F. (37), *Odice suava* HBN. (89), *Trichoplusia circumscripta* FRR. (103), *Copiphana lunaki moreana* THURNER. (121), *Oria musculosa* HBN. (237). Fotos: PIATKOWSKI.

Farbtafel 2


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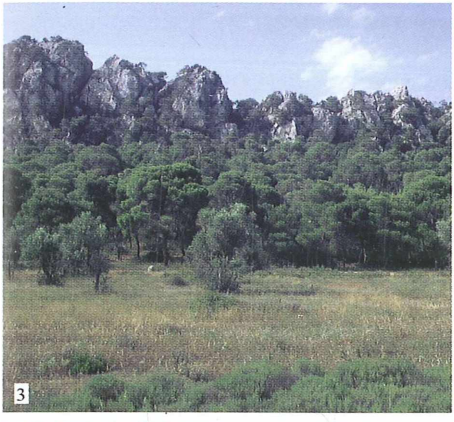
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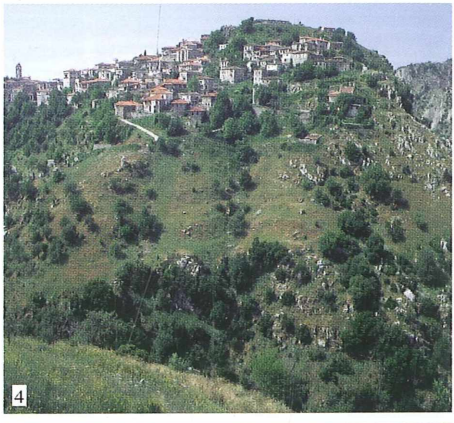
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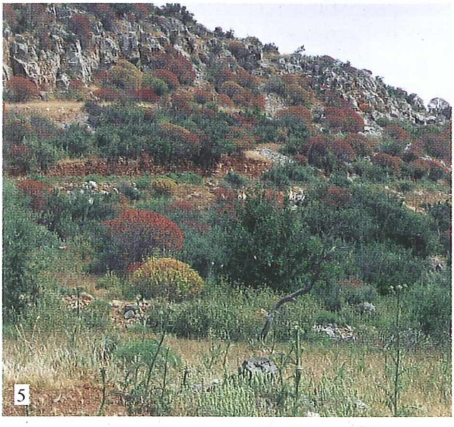
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Farbtafel 3

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Bei den Farbtafeln 3-6 verweisen die Zahlen in Klammern hinter den Artnamen auf die Numerierung der Arten im systematischen Teil, dort weitere Anmerkungen im Text.

Abb. 1: Habitat von *Cucullia verbasci* L. mit *Verbascum sinuatum, V. undulatum* und *V. longifolium*. Vatolakos (C), 800 m, 16 km N Grevena, Makedonia. Foto: 25.V.2005.

Abb. 2: Habitat von *Cucullia verbasci* L. mit *Verbascum densiflorum (thapsiforme)*. Agiokambos (E), 20 m, 50 km E Larissa, Ossa-SE, Thessalia. Foto: 2VI.2005.

Abb. 3: *Cucullia verbasci* L. (114). Erwachsene Raupen. Links: (lateral) an *Verbascum densiflorum*. Agiokambos (E), 20 m, 50 km E Larissa, Ossa-SE, Thessalia, 2.VI.2005. Rechts: (dorsal) an *V. sinuatum*. Vatolakos (C), 800 m, 16 km N Grevena, Makedonia, 25.V.2005.

Abb. 4: Habitat von *Cucullia verbasci* L. und *Cucullia thapsiphaga* TR. Ossa-Gebirge (bis 1272 m). Osthang bei Agiokambos, südlich Koutsoupia (E). Foto: 16.V.2000.

Abb. 5: *Cucullia verbasci* L. (114). Erwachsene Raupe (lateral, dorsal) an *V. sinuatum*. Vatolakos (C), 800 m, 16 km N Grevena, Makedonia, 25.V.2005.

Abb. 6: Habitat von *Cucullia verbasci* L. Timfristos-Gebirge (bis 2104 m) nordwestlich Karpenissi (N). Foto: 7.VI.1998.

Abb. 7: *Cucullia verbasci* L. (114). Erwachsene Raupen an *V. densiflorum*. Links: (lateral) Karpenissi (N), 1000 m, Timfristos, Sterea Ellada-NW, 7.VI.1998. Rechts: (dorsal) Asprangeli (G), 1100 m, Vikos-Schlucht, Ipiros-NE, 10.VI.1996. Fotos: PIATKOWSKI. Alle Raupenabbildungen sind Freilandaufnahmen.

Farbtafel 3


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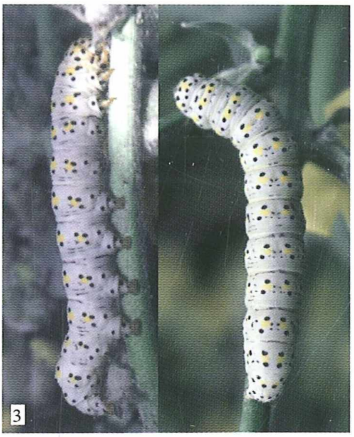
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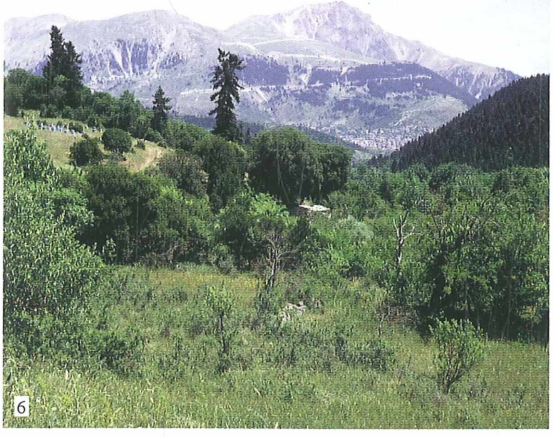
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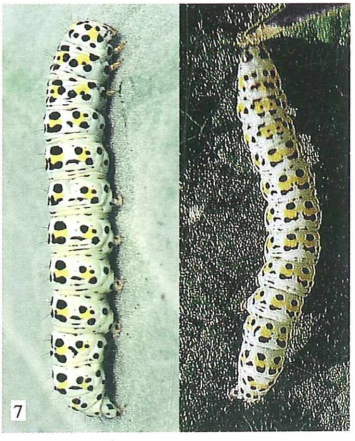
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Atalanta (Dezember 2006) **37** (3/4): 502-503, Würzburg, ISSN 0171-0079

Farbtafel 4

PIATKOWSKI, H.-J.: Beitrag zur Erfassung der Noctuidae Griechenlands (Insecta: Lepidoptera). - Atalanta (2006) **37** (3/4): 345-392, Würzburg (Dezember 2006).

Abb. 1: Habitat von *Cucullia thapsiphaga*-, *C. verbasci*- und *C. blattariae*-Raupen. Koukouli 2 km W (G), 950 m, östlich Asprangeli, Mitsikeli-Gebirge, Vikos-Schlucht, Ipiros-NE. Foto: 4.VI.1997.

Abb. 2: *Cucullia thapsiphaga* TR. (112). Erwachsene Raupen (lateral, dorsal) an *Verbascum lychnitis*. Koukouli 2 km W (G), 950 m, Vikos-Schlucht, Ipiros-NE, 11.VII.2004.

Abb. 3: Habitat von *Cucullia blattariae* ESP. Südliches Mittelgriechenland. Hochebene im südlichen Parnassos bei Desfina (P), 900 m, südlich Arahova, am nördlichen Golf von Korinth. Foto: 20.V. 2000.

Abb. 4: *Cucullia blattariae* ESP. (110). Erwachsene Raupe (dorsolateral) an *Scrophularia canina* und Kokons. Arahova (P), 1150 m, Parnassos, Sterea Ellada, 23.V.1999.

Abb. 5: Habitat von *Cucullia lychnitis* RBR. Pilio 3 km W (Q), 150 m, Insel Evia-Nord, Sterea Ellada-NE. Foto: 5.VII.2004.

Abb. 6: *Cucullia lychnitis* RBR. (113). Erwachsene Raupen (lateral, dorsal) an *Verbascum lychnitis* und Kokon. Pilio 3 km W (Q), 150 m, Insel Evia-Nord, 5.VII.2004.
Fotos: PIATKOWSKI. Alle Raupenabbildungen sind Freilandaufnahmen.

Farbtafel 4


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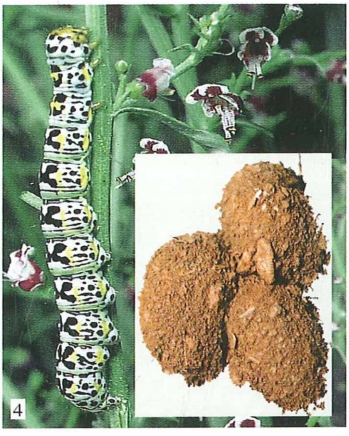
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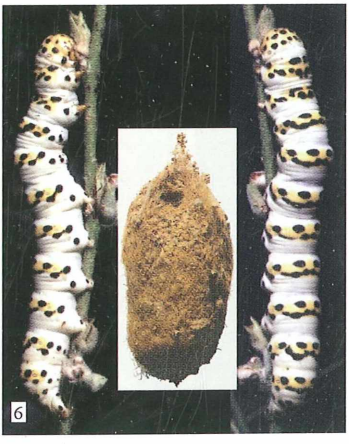
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Farbtafel 5

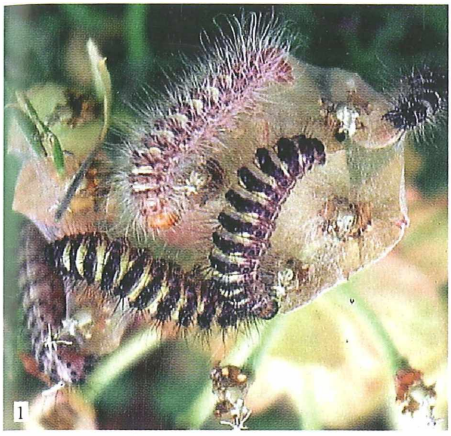
PIATKOWSKI, H.-J.: Beitrag zur Erfassung der Noctuidae Griechenlands (Insecta: Lepidoptera). - Atalanta (2006) **37** (3/4): 345-392, Würzburg (Dezember 2006).

Abb. 1-4: *Simyra nervosa* D. & S. (72). Abb. 1 und 2: Raupen vor und nach der letzten Häutung an *Euphorbia*-Blüten, -Blättern und -Stielen. Platanakia (A), 340 m, 75 km W Serres, 15 km W Kerkini-See, Makedonia-NE, 24.V.1998.
Abb. 3: Junge Raupen. Katara-Pass-E (H), 1700 m, 60 km W Kalambaka, Pindos, Thessalia-W. 24.VI.1992. Kokon aus Platanakia (wie Abb. 1 u. 2).
Abb. 4: Erwachsene Raupen (lateral, dorsolateral). Eptalofos (G), 800 m, 60 km SW Kastoria, Pindos-NE, Makedonia-W, 12.VI.1996.

Abb. 5: *Acronicta euphorbiae* D. & S. (68). Kokon und erwachsene Raupe (dorsolateral, ventral) an *Trifolium* (!). Neo Dermati (N), 700 m, 15 km S Karpenissi, Kaliakouda-NE, Sterea Ellada-NW, 5.VI.1998.

Abb. 6: *Apopestes spectrum* ESP. (42). Kokon und erwachsene Raupen. Links: (dorsolateral) Kalamaki (M), 450 m, 40 km SE Volos, Halbinsel Pilio-E, Thessalia-SE, 19.V.1999. Rechts: (dorsolateral) Davlia (P), 30 km NW Livadia, Parnassos-E-Ausläufer, Sterea Ellada-S-Mitte, 20.V.2000. Fotos: PIATKOWSKI. Alle Raupenabbildungen sind Freilandaufnahmen.

Farbtafel 5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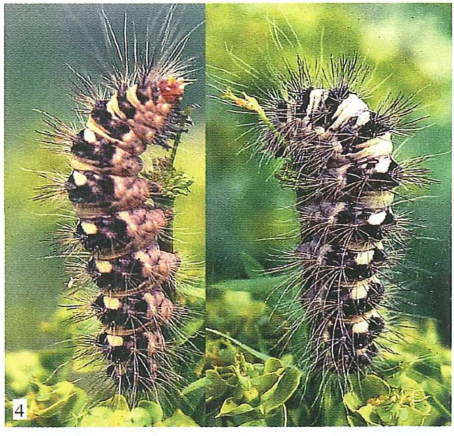
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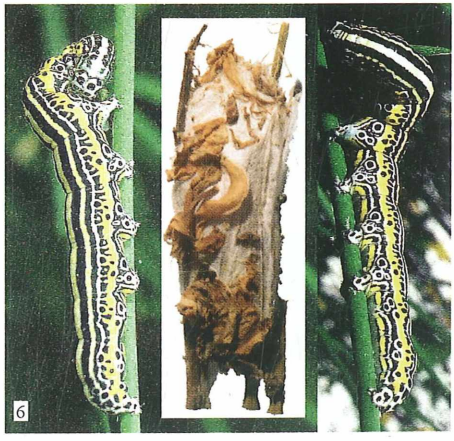
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Farbtafel 6

PIATKOWSKI, H.-J.: Beitrag zur Erfassung der Noctuidae Griechenlands (Insecta: Lepidoptera). - Atalanta (2006) **37** (3/4: 345-392, Würzburg (Dezember 2006).

Abb. 1–6: *Euclidia glyphica* L. (50). Die Individuen der griechischen Populationen (Abb. 1-4) sind gegenüber denen der mitteleuropäischen (Abb. 5, 6) deutlich größer, die Grundfarbe der Hinterflügel ist kräftiger orangebraun, das gesamte Erscheinungsbild ist dunkler.
Abb. 1: ♂, Trigona (H), 750 m, 30 km W Kalambaka, Katara-Pass-E, Thessalia, 17.VII.1991.
Abb. 2: ♀, Galaxidi (O), 30 m, 30 km S Amfissa, Sterea Ellada-S-Mitte, 24.V.1999.
Abb. 3: ♂, Aniada (N), 1160 m, 30 km SE Karpenissi, Kaliakouda, Sterea Ellada-NW, 28.V.1999.
Abb. 4: ♀, Kilada (D), 700 m, 18 km E Kosani, Makedonia, 23.VII.1991.
Abb. 5, 6: ♂, ♀, Deutschland, Hanau, 90 m, 18 km E Frankfurt, Hessen, 21.V., 6.VI.1975.

Abb. 7: *Catocala nymphagoga* ESP. (24). ♂, aberrativ, Mega Hori (N), 750 m, 18 km S Karpenissi, Sterea Ellada-NE, 15.-17.VII.1995.

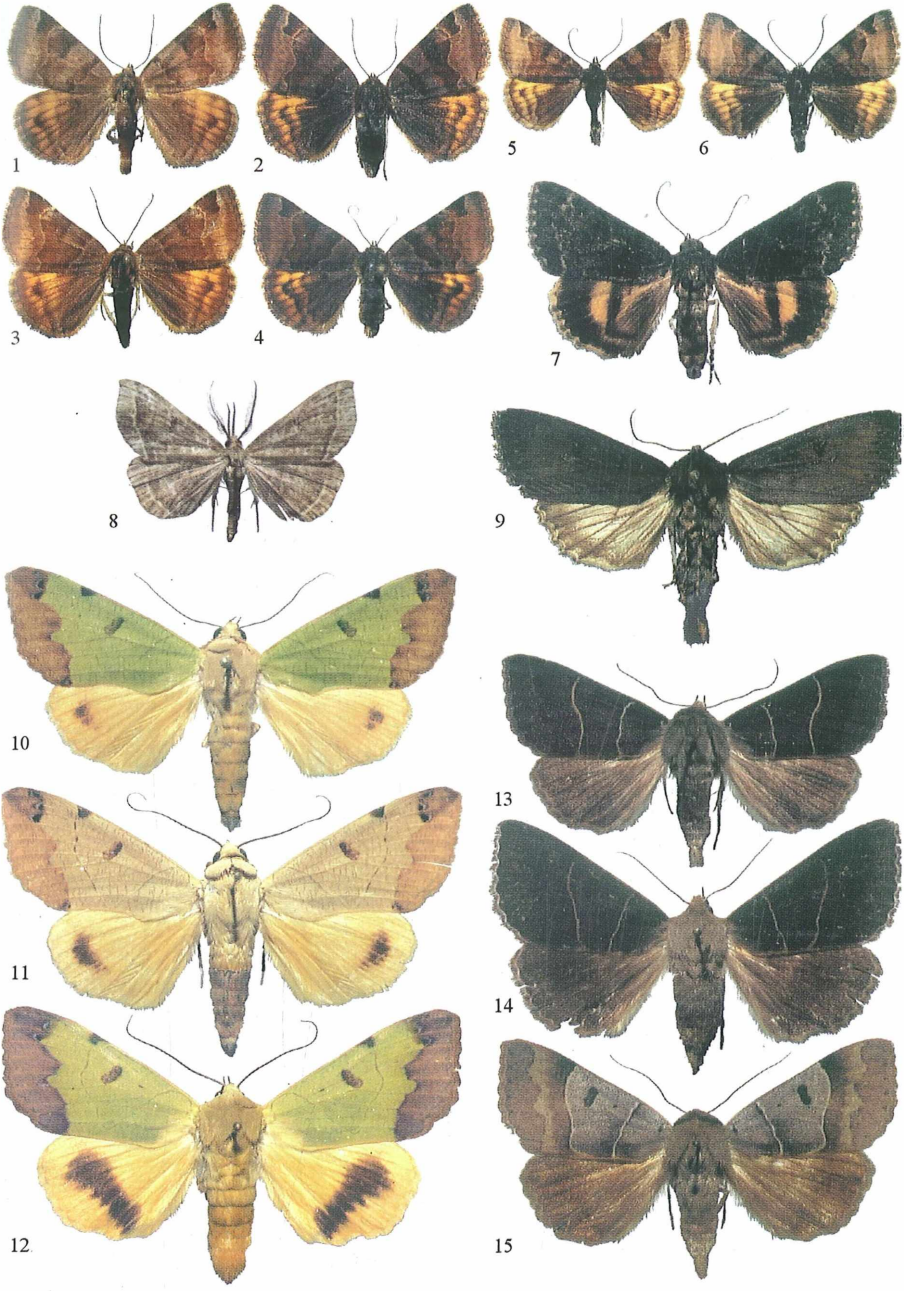
Abb. 8: *Polypogon simplicicornis* ZERNY (4). ♂, Limni Vouliakmenis (P), 15 m, 20 km NW Loutraki, Sterea Ellada-SW, 7.-8.VI.2005.

Abb. 9: *Nonagria typhae* THNBG. (235). ♂, aberrativ, Visitsa (M), 550 m, Halbinsel Pilio, Thessalia-SE, 5.-10.VII.1995. Die 3 vom Autor bisher in weit voneinander entfernt liegenden Regionen Griechenlands gefundenen Exemplare gehören alle dieser Form mit schwarzbraunen Vorderflügeln an.

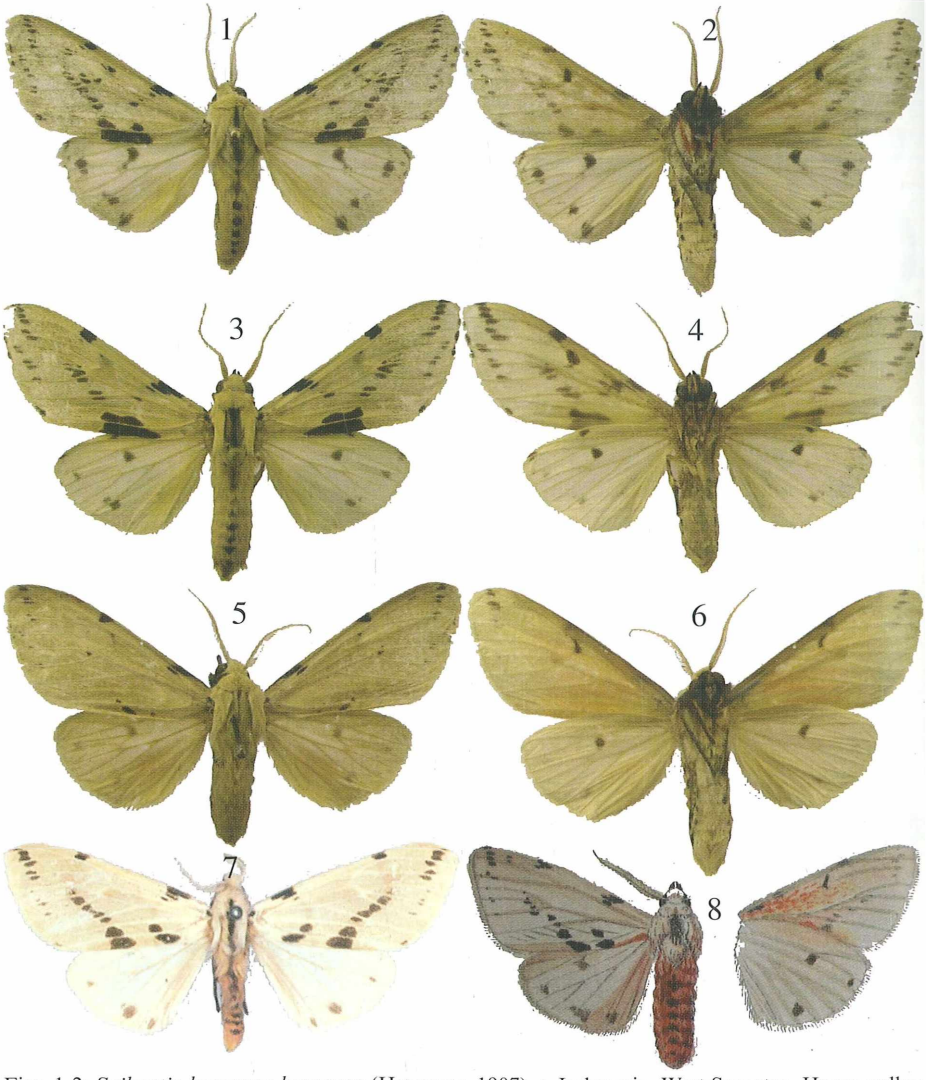
Abb. 10–12: *Ophiusa tirhaca* CRAMER (33). Etwa 70% aller vom Autor in Griechenland gesammelten oder vor Ort überprüften Exemplare weisen, geschlechterübergreifend, stark reduzierte Hinterflügelbänder auf (Abb. 10, 11).
Abb. 10: ♂, aberrativ, Limni Vouliakmenis (P), 15 m, 20 km NW Loutraki, 7.-8.VI.2005.
Abb. 11: ♂, aberrativ, Trigona (H), 750 m, Katara-Pass-E, Thessalia, 11.VIII.1994.
Abb. 12: ♀, Habitus typisch O. tirhaca CR., Vathia (T), 100 m, Halbinsel Mani, Peloponnisos, 26.V.2003.

Abb. 13–15: *Minucia lunaris* D. & S. (31). Abb. 13: ♂, als dunkle Form typisch für Griechenland, Asprangeli (G), 1050 m, 30 km N Ioannina, Mitsikeli, Ipiros-NE, 3.-7.V.2000.
Abb. 14: ♀, ein Exemplar mit atypisch verlaufenden Querlinien, Mega Peristeri (H), 700 m, 35 km E Ioannina, Lakmos-NW, Pindos, Ipiros-E, 13.V.1999.
Abb. 15: ♀, Habitus typisch lunaris, Asprangeli (G), 1050 m, 30 km N Ioannina, Ipiros, 5.V.2000.
Fotos: PIATKOWSKI. Alle Abbildungen im Maßstab 1:1.

Farbtafel 6

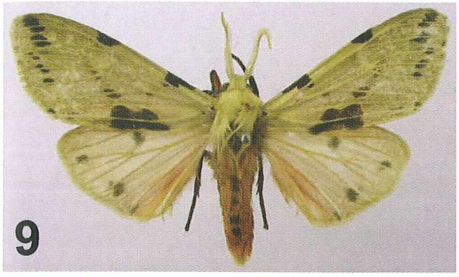


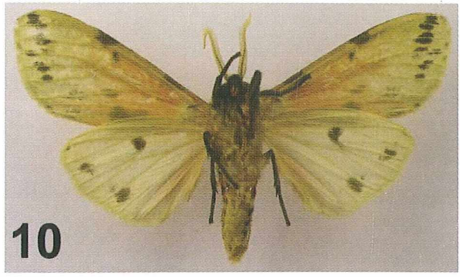
Colour plate 7 / Farbtafel 7

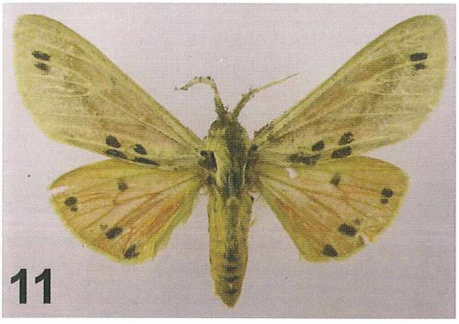


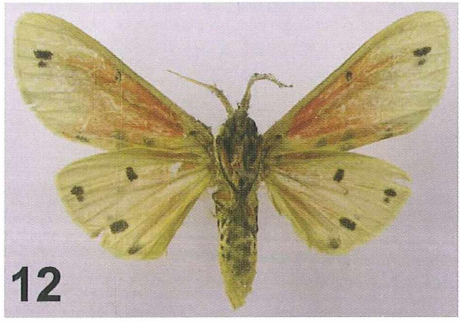
Figs. 1-2: *Spilarctia hypogopa hypogopa* (HAMPSON, 1907) ♂, Indonesia, West Sumatra, Harau valley, h=700 m, V.2004, native collector leg. (SZMN); 1 – upperside, 2 – underside.
Figs. 3-4: *Spilarctia hypogpa hypogopa* (HAMPSON, 1907) ♂, Malaysia, Borneo, Sarawak, G. Serapi, 29.IV.1990, coll. Y. KISHIDA; 3 – upperside, 4 – underside.
Figs. 5-6: *Spilarctia hypogopa mentawaica* DUBATOLOV **subsp. nov.**, ♂, holotype, Indonesia, Mentawai isls., Siberut isl., Bojakan, IX.2004, native collector leg. (SZMN); 5– upperside, 6: underside.
Fig. 7: *Spilarctia moorei* (SNELLEN, 1879) ♂, figure from the original description.
Fig. 8: *Spilarctia moorei* (SNELLEN, 1879) ♂, lectotype, [Indonesia], Celebes, Lokka [National Natural History Museum (Naturalis) in Leiden], by courtesy of Dr. J. DE JONG and Dr. R. DE VOS.

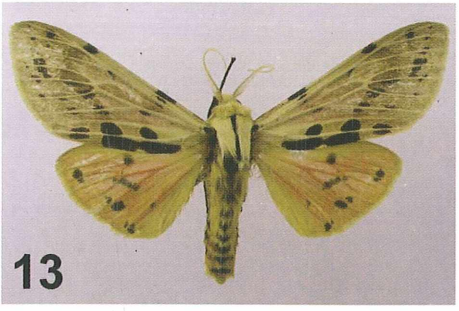
Colour plate 8 / Farbtafel 8

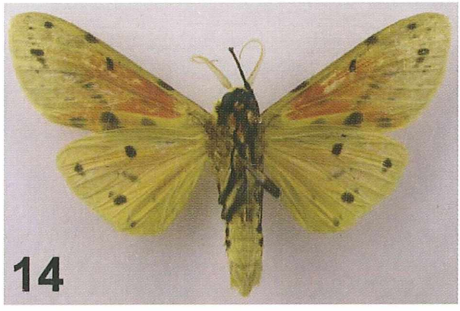


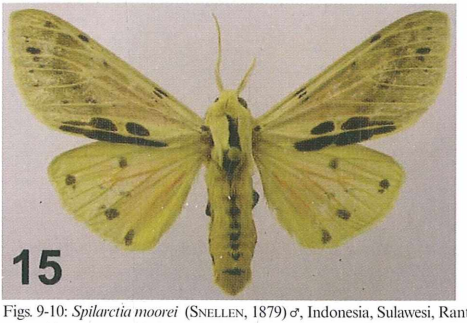


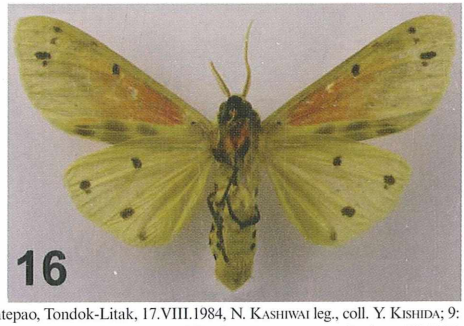












Figs. 9-10: *Spilarctia moorei* (SNELLEN, 1879) ♂, Indonesia, Sulawesi, Rantepao, Tondok-Litak, 17.VIII.1984, N. KASHIWAI leg., coll. Y. KISHIDA; 9: upperside, 10: underside. Figs. 11-12: *Spilarctia philippina* DUBATOLOV & KISHIDA **spec. nov.**, holotype ♂, Philippines, Negros I., Mt. Canlaon, IX.1997, native collector leg. (National Science Museum, Tokyo); 11: upperside, 12: underside. Figs. 13-14: *Spilarctia philippina mindanaoica* DUBATOLOV & KISHIDA **subspec. nov.**, holotype ♂, Philippines, Mindanao I., Mt. Busa, 11-18.VI.1997, native collector leg. (National Science Museum, Tokyo); 13: upperside, 14: underside. Figs. 15-16: *Spilarctia philippina mindanaoica* DUBATOLOV & KISHIDA **subspec. nov.**, paratype ♂, Philippines, Mindanao I., Mt. Busa, 11-18.VI.1997, native collector leg., coll. Y. KISHIDA; 15: upperside, 16: underside.

Colour plate 9 / Farbtafel 9

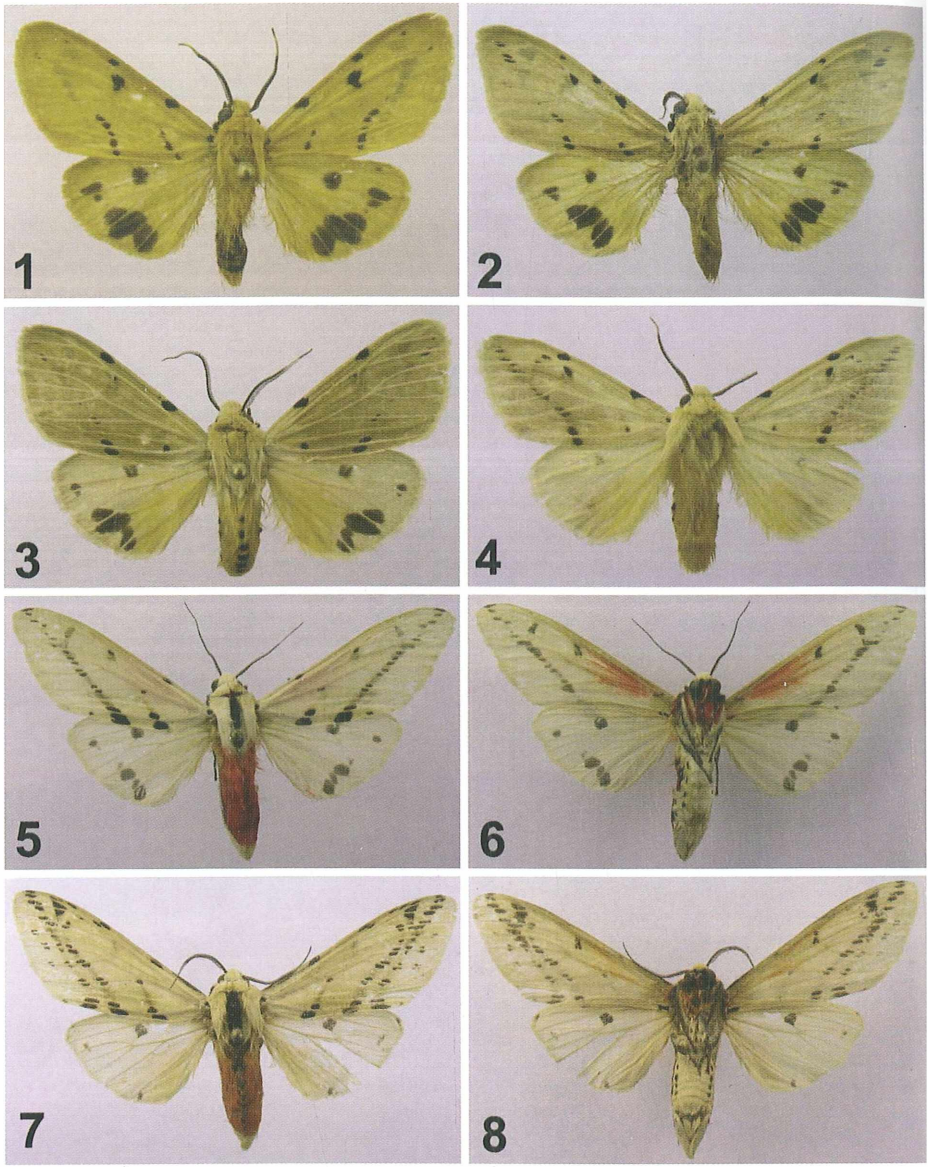


Fig. 1: *Spilarctia (punctata) siberuta* **spec. nov.**, paratype ♂, Indonesia, Mentawai isls., Siberut isl., Bojakan, IX.2004, native collector leg. Fig. 2: *Spilarctia punctata* (Moore, 1859) ♂, Indonesia, E Java, Mt. Argapura, IV.1995, anonymous leg., received from coll. Y. Kishida. Fig. 3: *Spilarctia (punctata) procedra* (Swinhoe, 1907) ♂, Indonesia, West Sumatra, Harau valley, 700 m, V.2004, native collector leg. Fig. 4: *Spilarctia (punctata) congruenta* (Thomas, [1993]) ♂, Indonesia, Java, Buitenzorg., 27-29.VII.1907, Bar. Brüggen leg. Fig. 5-6: *Spilarctia (ananda) irina* **spec. nov.**, holotype ♂, Indonesia, West Sumatra, Mt. Sanggul, 1300 m, VII.2004, native collector leg., upperside (5), underside (6). Fig. 7-8: *Spilarctia ananda* (Roepke , 1938) ♂, Indonesia, Bali, Tamblingan, VI.2004, native collector leg., upperside (7), underside (8).

Colour plate 10 / Farbtafel 10

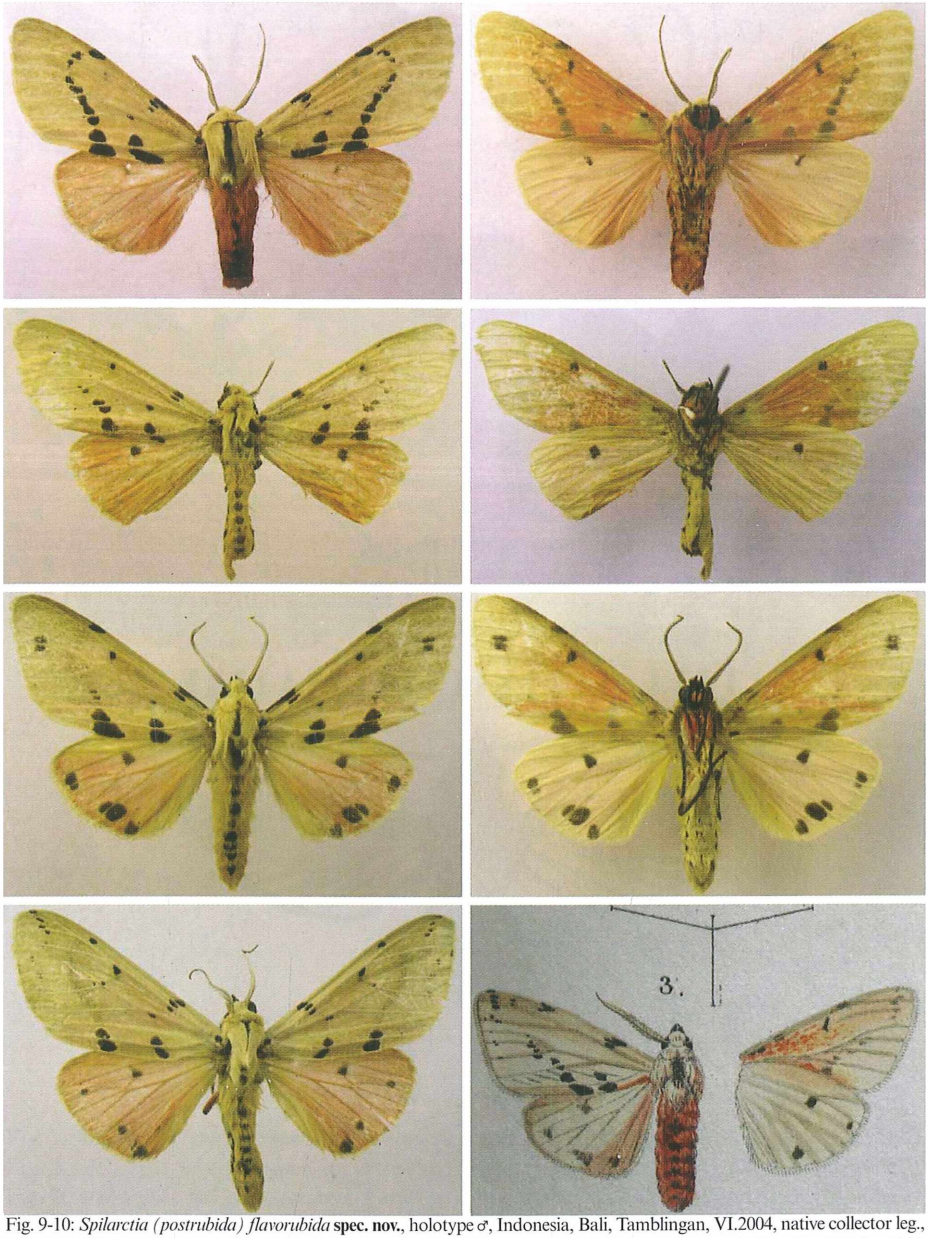


Fig. 9-10: *Spilarctia (postrubida) flavorubida* **spec. nov.**, holotype ♂, Indonesia, Bali, Tamblingan, VI.2004, native collector leg., upperside (10), underside (11). Fig. 11-12: *Spilarctia postrubida* (Wileman, 1910) ♂, Taiwan (Formosa), Nan Tow, Wushe, 1966, received from coll. Y. Kishida, upperside (11), underside (12). Fig. 13-14: *Spilarctia postrubida* (Wileman, 1910) ♂, Vietnam, Ninh Bình, Gia Vien, Cuc Phuong, 160 m, 20-21.III.1998, K. Yazaki leg., coll. Y. Kishida, upperside (13), underside (14). Fig. 15: *Spilarctia postrubida* (Wileman, 1910) ♂, Nepal, Mechi, Godok, 14.IV 1993, coll. Y. Kishida. Fig. 16: *Spilarctia moorei* (Snellen, 1879) ♂, figure from the original description by Snellen, 1879.

Colour plate 11 / Farbtafel 11

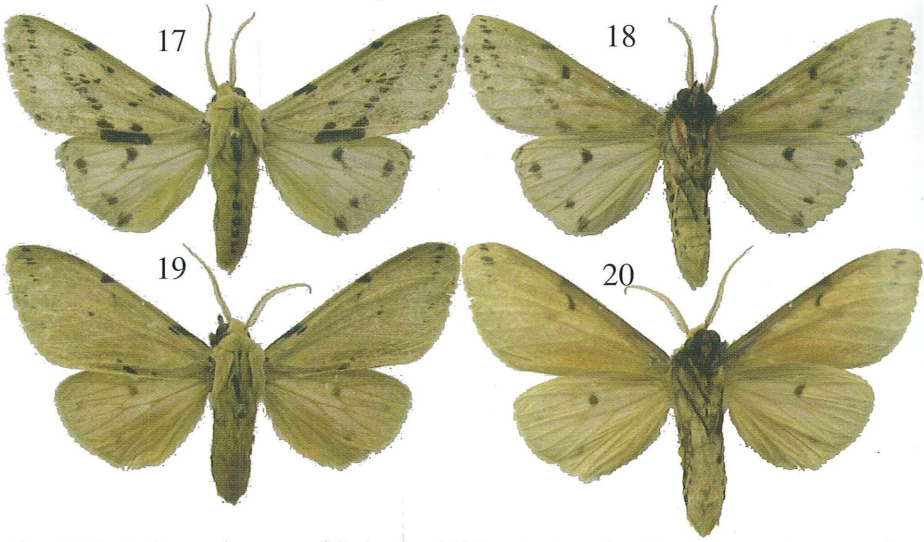
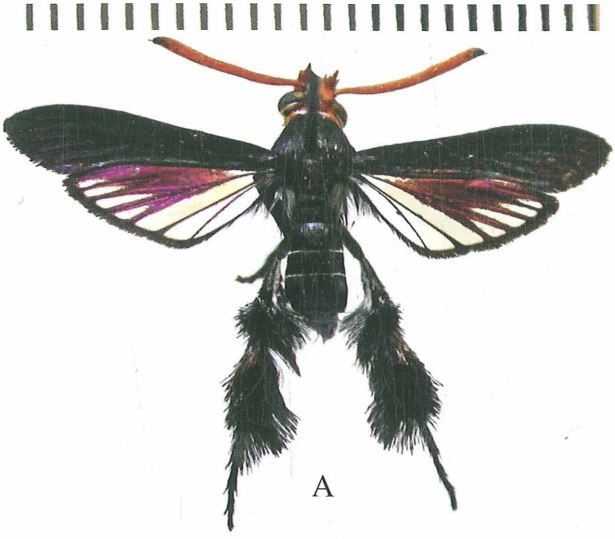


Fig. 17-18: *Spilarctia hypogopa* (HAMPSON, 1907) ♂, Indonesia, West Sumatra, Harau valley, 700 m, V 2004, native collector leg., upperside (17), underside (18).
Fig. 19-20. *Spilarctia hypogopa* (HAMPSON, 1907) ♂, Indonesia, Bali, Tamblingan, VI.2004, native collector leg., upperside (19), underside (20).



Melanosphecia auricollis (ROTHSCHILD, 1912), Sarawak, Gunung Gading N.P., 23.-26. 10. 2003 leg. W. MEY.

Colour plate 12 / Farbtafel 12

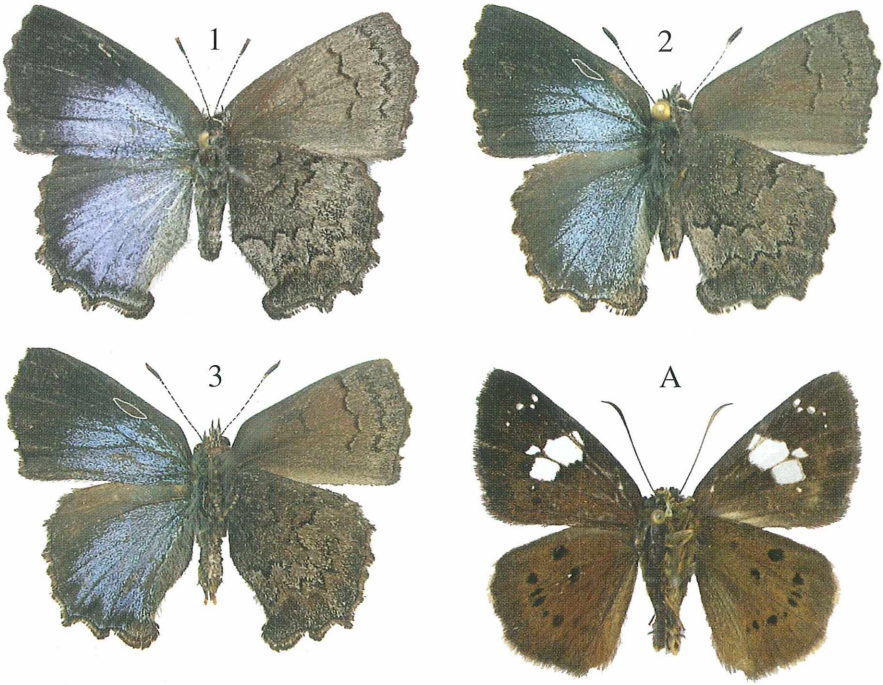


Fig. 1: *Ahlbergia clarolinea* **spec.nov.** Holotype ♀ upperside (left half) and underside (right half).
Fig. 2: *Ahlbergia clarolinea* **spec.nov.** Paratype ♂ upperside (left half) and underside (right half).
Fig. 3: *Ahlbergia clarolinea* **spec.nov.** Paratype ♂ upperside (left half) and underside (right half).
Fig.A: *Colandia uemurai motuoa* **subspec. nov.** holotype ♂ Upperside (left half) and Underside (right half).

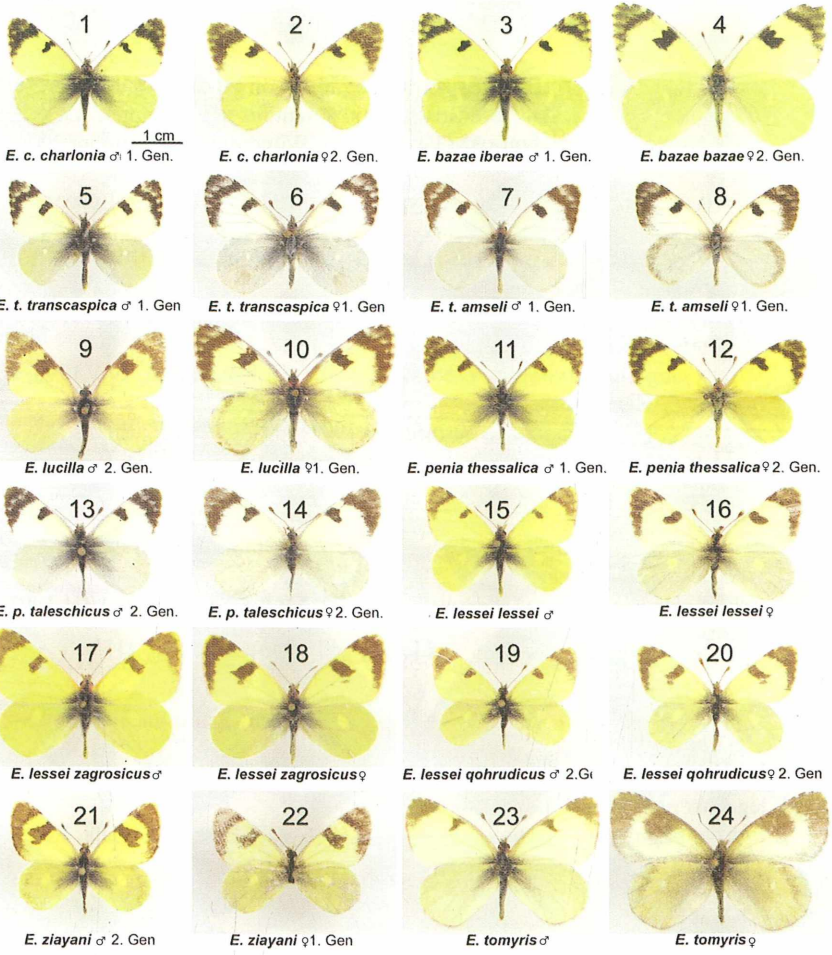
Colour plate 13 / Farbtafel 13

BACK, W., KNEBELSBERGER, TH. & M. A. MILLER: The phylogenetic relationships of the species and subspecies of the subgenus *Elphinstonia* KLOTS, 1930 (Lepidoptera, Pieridae). - Atalanta **37** (3/4): 469-482, Würzburg (Dezember 2006).

Abbreviations: *E.: Elphinstonia, c.: charlonia, p.: penia, t.: transcaspica*, Gen.: generation. Same scale for 1-24.Localities: **1**: Env. Tiznit, Maroc, 100m, Anti-Atlas occ., 1.-15.3.[19]99, M. R. TARRIER (129). **2**: Env. Tiznit, Maroc, 100m, Anti-Atlas occ.,16.-30.4.1999, leg. M. R. TARRIER (129). **3**: Umg. Caspe, Aragon, Spanien, 14.-16.3.05, W BACK, FS. **4**: Prov. Granada, Baza, 900m, Hoya de Baza, 31.5.2004, W. & CO. BACK, FS. **5**: Turkmenia mer. Kopetdag Mts., Kara Kala, 400m, 1.IV.1992,L. BIEBER coll. **6**: USSR, Turkmenia, Kopet-Dag Mts., 400-600m, 58°05'E, 37°59'N, 15.-19-IV.1991, No. L1, leg. G.CSORBA, GY. FÁBIÁN, B. HERCZIG, M. HERBIAY & G. RONKAY. **7**: Dalaki, Straße Bushir-Kazerun, 15.-21.3.1971 (19.), W. BACK, FR, Leist. **8**: Dalaki, Straße Bushir-Kazerun, 15.-21.3.1971 (19.), W. BACK, FR, Leist.**9**: Afghanistan, Jalalabad-Torkham, 500m, 18.4.1976, leg. Dr. RESHÖFT. **10**: O-Afghaniatan, Ghanikhel Umg., ca. 1000m, 14.3.1975, leg. M. DIETZ. **11**: Treska-Schlucht, Umg. Skopje, Mazedonien, 5.5.1978, leg. W. BACK, FR. **12**: Treska-Schlucht, Umg. Skopje, Mazedonien, e. l. 25.5.-10.6.[19]77, R. 20.5.[19]77, leg. W. BACK FR. **13**: Iran, Zanjan prov., östl. Mt. Tales, 1100-1300m, 9.-30.5.2003, leg. M. ZIAYAN, coll. W. BACK, FS. **14**: Iran, Zanjan prov., östl. Mt. Tales, 1100-1300m, 9.-30.5.2003, leg. M. Ziayan, coll. W. BACK, FS. **15**: Iran, Tehran prov., Khor-Sijan, 2400-2900m, 23.V.2001, leg. W. BACK, FS. **16**: N. Teheran, Darband (Tochal), Elburs, 2700m, 11.6.1999. **17**: Iran, Lorestan, Dorud, 15km S, 33°25' N, 49°08' E, 2700m, 4.-6.6.2000, leg. JIRI KLIR. **18**: Iran, Lorestan, Dorud, 15km S, 33°25' N, 49°08' E, 2700m, 4.-6.6.2000, leg. JIRI KLIR.**19**: Iran, Esfahan prov., Wadar-Zefre, Mt. Qohrod, 2400-2900m, 21.V.2001, leg. W. BACK, FS. **20**: Iran - centr. Esfahan prov., Qohrud, Mts. Zefre, 2400-2900m, 18.6.1999, leg. V. MAJOR. **21**: Iran, Zanjan prov., östl. Mt. Tales, 1100-1300m, 31.5.2002, leg. M. ZIAYAN, coll. W. BACK, FS. **22**: Iran, Zanjan prov., östl. Mt. Tales, 1100-1300m, 31.5.2002, leg. M. ZIAYAN, coll. W. BACK, FS. **23**: Turkmenistan, Ashkhabad, 10.4.89. **24**: Turkmenien, Kopetdagh, Aschchabad, 400m, 1.-10.IV.1991, leg. V. LUKHTANOV.

Colour plate 13 / Farbtafel 13

Plate 1 (Figs 1-24): species and subspecies of *Elphinstonia*

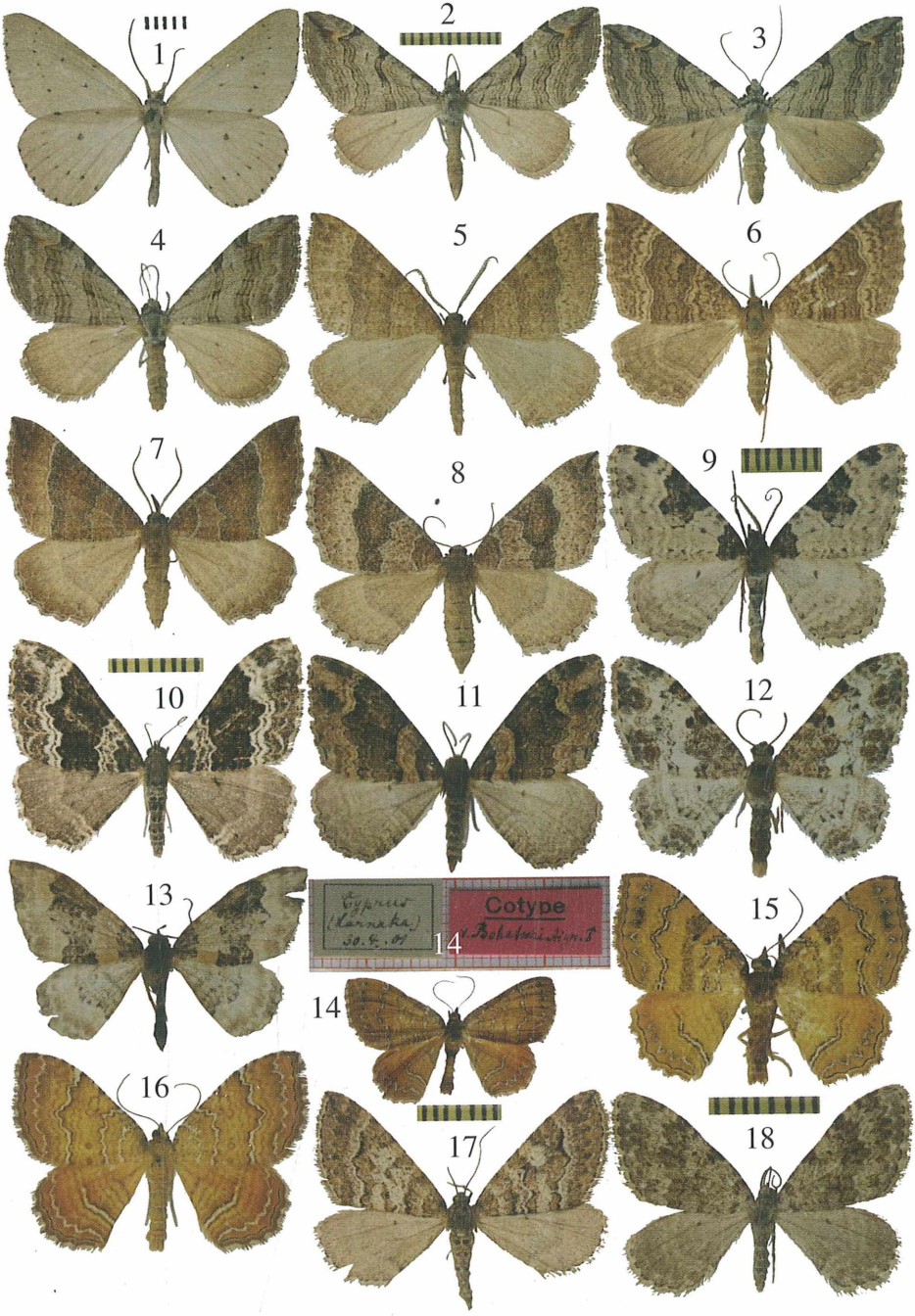


Farbtafel 14

FISCHER, H. & S. LEWANDOWSKI: Die Geometriden- Fauna von Zypern – eine Überarbeitung aller bisher bekannten Arten. (2. Teil: Orthostixinae und Larentiinae) (Lepidoptera: Geometridae, Orthostixinae, Larentiinae). - Atalanta **37** (3/4): 329-344, Würzburg (Dezemmber 2006).

Abb. 1: *Orthostixis cinerea* REBEL,1916, ♂, Zypern, Foini, 11.VI.2002, leg. LEWANDOWSKI & FISCHBACHER.
Abb. 2: *Aplocera plagiata* (LINNAEUS, 1758), ♂, Zypern, Agridia, 28.IX.2000, leg. FISCHER, H & S. LEWANDOWSKI.
Abb. 3: *Aplocera plagiata* (LINNAEUS, 1758), ♀, Kreta, Umg. Anogia, 20.IV.1994, ca. 1000 m ex larva, leg. CHRISTINE & HEINZ FISCHER.
Abb. 4: *Aplocera plagiata* (LINNAEUS, 1758), ♀, Korsika, Col de Vergio, 19.V.1996, 800 m, leg. FISCHER, H & C. ZEHENTNER.
Abb. 5: *Larentia clavaria pallidata* (STAUDINGER, 1901), ♂, Zypern, Kathikas, 1.XI.2002, leg. FISCHER, H & S. LEWANDOWSKI.
Abb. 6: *Larentia clavaria pallidata* (STAUDINGER, 1901), ♀, Zypern, Gialia, 2.XI.2002, leg. FISCHER, H & S. LEWANDOWSKI.
Abb. 7: *Larentia clavaria clavaria* (HAWORTH, 1809), ♂, Malta, St. Julian's, 1.III.1998, 5 m, e.l., leg. LEWANDOWSKI & TOBER.
Abb. 8: *Larentia clavaria clavaria* (HAWORTH, 1809), ♀, Malta, St. Julian's, 1.III.1998, 5 m, e.l., leg. LEWANDOWSKI & TOBER.
Abb. 9: *Xanthorhoe fluctuata* (LINNEAUS, 1758), ♂, Zypern, Latsi bei Polis, 31.V.2000, leg. LEWANDOWSKI & TOBER.
Abb. 10: *Xanthorhoe oxybiata* (MILLIÈRE, 1872), ♀, Zypern, Kathikas, 1. XI. 2002, leg. FISCHER, H & S. LEWANDOWSKI.
Abb. 11: *Catarhoe hortulanaria palaestinensis* (STAUDINGER, 1895), ♂, Zypern, Kathikas, 1. XI. 2002, leg. FISCHER, H & S. LEWANDOWSKI..
Abb. 12: *Catarhoe permixtaria* (HERRICH-SCHÄFFER, 1856, ♂, Zypern, Nikoklela, 1.- 8.V.2000, 150 m, leg. FISCHER, H & S. LEWANDOWSKI.
Abb. 13: *Protorhoe unicata* (GUENÉE, 1857), ♂, Zypern, Nikoklela 25.-31.III.2001, 150 m, leg. HENTSCHOLEK.
Abb. 14: *Camptogramma bilenatum bohatschi* (AIGNER, 1902), Typus ♂, Zypern, Larnaca, 30.IV.[19]01, coll. MNHU.
Abb. 15: *Camptogramma bilenatum bohatschi* (AIGNER, 1902), ♀, Zypern, Kidasi, 6.-12.VI.2002, 300 m, leg. HENTSCHOLEK.
Abb. 16: *Camptogramma bilenatum bohatschi* (AIGNER, 1902), ♂, Lesbos, Umg. Plomari 28.V.2005, 180 m, leg. SVETLANA & HEINZ FISCHER.
Abb. 17: *Antilurga adlata* (STAUDINGER, 1895), ♀, Zypern, Mylikouri, 3.XI.2002, leg. FISCHER, H & S. LEWANDOWSKI.
Abb. 18: *Nebula ablutaria* (BOISDUVAL, 1840), ♂, Zypern, Kathikas, 1.XI.2002, leg. FISCHER, H & S. LEWANDOWSKI.

Farbtafel 14



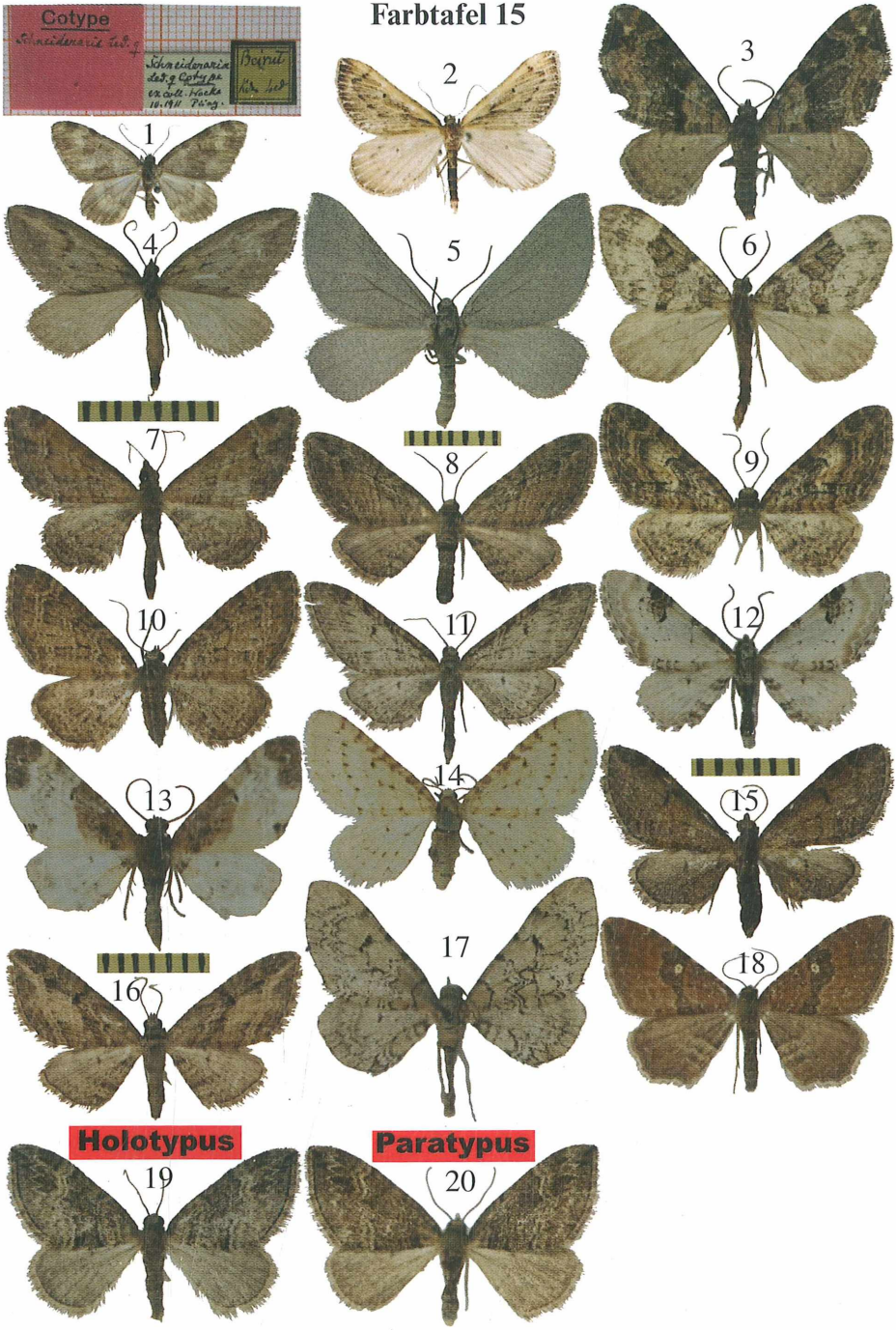
Farbtafel 15

FISCHER, H. & S. LEWANDOWSKI: Die Geometriden- Fauna von Zypern – eine Überarbeitung aller bisher bekannten Arten. (2. Teil: Orthostixinae und Larentiinae) (Lepidoptera: Geometridae, Orthostixinae, Larentiinae). - Atalanta **37** (3/4): 329-344, Würzburg (Dezemmber 2006).

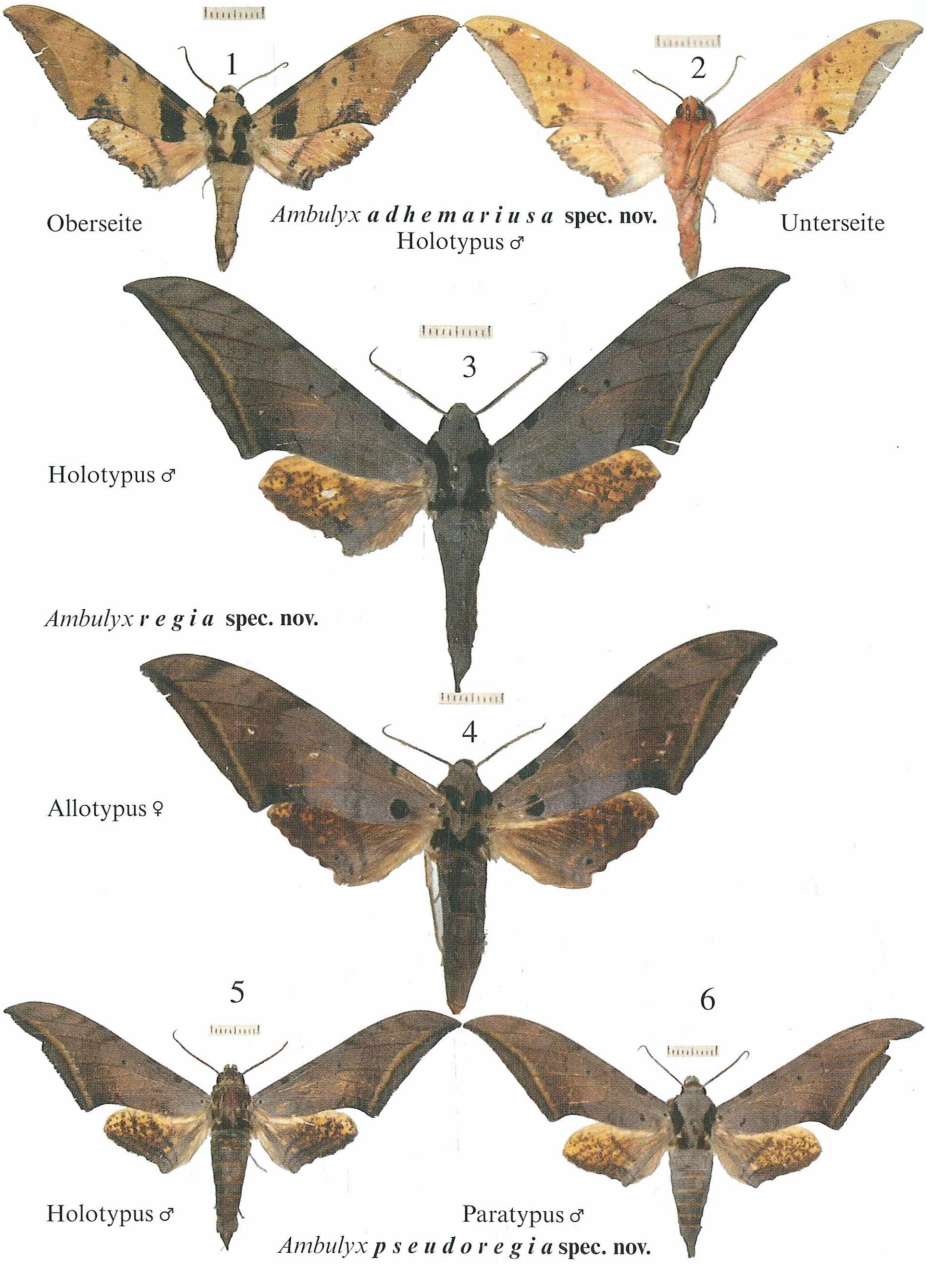
Abb. 1: *Nebula schneideraria* (LEDERER, 1855), Typus ♀, Beirut, X. 1911, leg. PÜNG.[ELER], coll. MNHU.
Abb. 2: *Myinodes shohami* HAUSMANN, 1994, ♂, Zypern, Limassol, Ypsonas, 30.I.2003, 50 m, leg. GEORGIOU.
Abb. 3: *Oulobophora externaria* (HERRICH-SCHÄFFER, 1848), ♀, Zypern / West, Nikloklela / Paphos, 25.-31.III.2001, 150 m, leg. HENTSCHOLEK.
Abb. 4: *Chesias rhegmatica* PROUT, 1937, ♂, Zypern, Latsi bei Polis, 28.II.1999, leg. LEWANDOWSKI & TOBER.
Abb. 5: *Lithostege palaestinensis* AMSEL, 1935, ♂, Zypern, Lefkosia, Archangelos, 3.IV.2002, leg. MAKRIS.
Abb. 6: *Thera variata subtaurica* (WEHRLI, 1932), ♂, Zypern, Pano Amiantos Umg., 27. IX 2002, 1640 m, leg. HENTSCHOLEK.
Abb. 7: *Gymnoscelis rufifasciata* (HAWORTH, 1809), ♂, Zypern, Latsi bei Polis, 10.VI.2000, leg. LEWANDOWSKI & TOBER.
Abb. 8: *Gymnoscelis rufifasciata* (HAWORTH, 1809), ♀, Zypern, Kathikas, 1.XI.2002, leg. FISCHER, H & S. LEWANDOWSKI.
Abb. 9: *Eupithecia dubiosa* DIETZE, 1910, ♂, Zypern, Latsi bei Polis, 28.II.1999, leg. LEWANDOWSKI & TOBER.
Abb. 10: *Eupithecia reisserata* PINKER, 1976, ♂, Griechenland, Parnassos Oros Umg. Delphi, 16.IV.1979, Li, 500-700 m, G. BAISCH, coll. ZSM.
Abb. 11: *Eupithecia quercetica* PROUT, 1938, ♂, Zypern, Latsi bei Polis, 28.II.1999, leg. LEWANDOWSKI & TOBER.
Abb. 12: *Eupithecia centaureata* ([DENIS & SCHIFFERMÜLLER], 1775), ♂, Zypern, Latsi bei Polis, 28.II.1999, leg. LEWANDOWSKI & TOBER.
Abb. 13: *Eupithecia breviculata* (DONZEL, 1837), ♂, Zypern, Nikoklela, 1.-8.V.2000, 150 m, leg. HENTSCHOLEK.
Abb. 14: *Eupithecia cerussaria* (LEDERER, 1855), ♂, Syrien, Beyrouth, leg. O. STAUDINGER, coll. ZSM.
Abb. 15: *Eupithecia ultimaria* BOISDUVAL, 1840, ♀, Zypern, Nikoklela, 25.-31.III.2001, 150 m, leg. HENTSCHOLEK.
Abb. 16: *Eupithecia ericeata* RAMBUR, 1833, ♂, Zypern, Kathikas, 1.XI.2002, leg. FISCHER, H & S. LEWANDOWSKI.
Abb. 17: *Eupithecia schiefereri* BOHATSCH, 1893, ♂, Lesbos, Umg. Plomari, 24.V.2005, 180 m, leg. SVETLANA & HEINZ FISCHER.
Abb. 18: *Orthonama obstipata* (FABRICIUS, 1794), ♀, Zypern, Gialia, 2.XI.2002, leg. FISCHER, H & S. LEWANDOWSKI.
Abb. 19: *Perizoma bifaciata melanaria* **subspec. nov.**, Holotypus ♂, Zypern, Lefkara, Umgebung, 29.IX.2004, 800 m, leg. LEWANDOWSKI & TOBER.
Abb. 20: *Perizoma bifaciata melanaria* **subspec. nov.**, Paratypus ♀, Zypern, 2 km südlich von Agridia, 28.IX.2000, 1060 m, leg. FISCHER, H & S. LEWANDOWSKI.

Alle Falter coll. S. LEWANDOWSKI & H. FISCHER, außer Tafel 14, Abb. 14: coll. MNHU, Tafel 15, Abb. 1: coll. MNHU, Abb. 2: coll. MAKRIS, Tafel 15, Abb. 10: coll. ZSM, Abb. 14: coll. ZSM. Alle Fotos S. LEWANDOWSKI & H. FISCHER, außer Tafel 15, Abb. 2: MAKRIS.

Farbtafel 15



Farbtafel 16



Ambulyx ***a d h e m a r i u s a*** **spec. nov.**
Holotypus ♂

Ambulyx ***r e g i a*** **spec. nov.**

Ambulyx ***p s e u d o r e g i a*** **spec. nov.**

Fundortangaben siehe Seite 483-486 (Maßskala jeweils 1 cm).