

Nicetosoma gen. nov., a new genus for the
 " *Spilosoma* " *niceta* group
 of species East of the Weber Line
 (Lepidoptera: Erebidae, Arctiinae, Arctiini)

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Abstract. A new genus name is proposed for the *niceta* group of nine species which previously was considered to belong to *Spilosoma* Curtis, 1825. Two new species are described, *Nicetosoma meforensis* spec. nov. and *Nicetosoma sulphurata* spec. nov. The following taxonomic changes are proposed: *Diacrisia niceta intermedia* Rothschild, 1910 syn. nov., *Diacrisia niceta mysolica* Rothschild, 1915 syn. nov. and *Diacrisia niceta pallida* syn. nov. are synonymized with *Diacrisia niceta papuana* Rothschild, 1910, which itself will be raised from subspecies level to species level as *Nicetosoma papuana* (Rothschild, 1910) stat. nov. and the same is done with *Diacrisia niceta saturata* Rothschild, 1910 to *Nicetosoma saturata* (Rothschild, 1910) stat. nov.

Rangkuman. Nama genus yang baru diusul untuk *niceta* group dengan sembilan spesies, yang sebelumnya dianggap termasuk dalam *Spilosoma* Curtis, 1825. Dua spesies baru dipertelakan, *Nicetosoma meforensis* spec. nov. dan *Nicetosoma sulphurata* spec. nov. Perubahan taksonomis diusulkan sebagai berikut: *Diacrisia niceta intermediata* Rothschild, 1910 syn. nov. *Diacrisia niceta mysolica* Rothschild, 1915 syn. nov. dan *Diacrisia niceta pallida* Rothschild, 1916 syn. nov. dinyatakan sinonim dengan *Diacrisia niceta papuana* Rothschild, 1910 yang ditingkatkan dari tingkat subspecies menjadi spesies, yaitu *Nicetosoma papuana* (Rothschild, 1910) stat. nov. dan yang sama dibuat dengan *Diacrisia niceta saturata* Rothschild, 1910 menjadi *Nicetosoma saturata* (Rothschild, 1910) stat. nov.

Introduction

The super genus *Spilosoma* Curtis, 1825 is used for a wide range of arctiine species world wide with more or less the same wing shape and wing pattern of black dots and lines. Genitalia studies however reveal that the taxon is far from being monophyletic and should be revised thoroughly. Because of the great number of paraphyletic species and the many more or less isolated species groups this can

only be done in parts, geographically or by groups of related species. Many authors use the taxon *Spilosoma* for Holarctic groups of species (including the type species *Bombyx menthastris* [Denis & Schiffermüller], 1775 = *Phalaena lubricipeda* Linnaeus, 1758) and *Spilarctia* Butler, 1875 for the Indo-Australian groups of species. This is not correct because the type species of *Spilarctia* is the Palaearctic *Phalaena lutea* Hufnagel, 1766. The genitalia of both species also show that they are congeneric which consequently makes *Spilarctia* Butler, 1875 a junior synonym of *Spilosoma* Curtis, 1825. Most species in Indo-Australia have modified genitalia in comparison with those of true *Spilosoma*. Male genitalia of *Spilosoma* show rather small and simplified compact valves while most species in the Indo-Australian region have longer stretched valves with usually processes and extensions. The aedeagi also show differences between both groups, for instance the indistinct carinae in holarctic *Spilosoma* while the Indo-Australian species almost without exception have a distinct carinal plate with carinae (teeth or thorns). Fields of scobination and small cornutal spines on the vesica lobes are present in both groups. Within these modified species groups other (sub)groups could be recognized, as recently is done by Thomas (1990) with *Lemyra* Walker, 1856, by Dubatolov (2005) with *Australemyra*, by Dubatolov & Kishida (2006) with *Hollowayana* and Dubatolov et al. (2007) with *Spilaethalida*. Judged by the study of genitalia we can expect some more newly recognized species groups to be ordered in (sub)genera. However, defining such groups and considering those to be distinct (new) genera is not easy and seems not always justified by external characters alone. Not all characters, in genitalia and wing pattern, seem to support separating these groups at genus level from the original *Spilosoma*. It should therefore be wise to restrain the production of other genera within *Spilosoma* and restrict at most to species groups until molecular biological research reveals more prove for division of (sub)genera. In the tribe Spilosomini the *niceta* species group were traditionally arranged under *Spilosoma*. The species are very characteristic with the pale buff to orange-yellow forewings and rose-red hindwings, usually with a pattern of an oblique postmedial row of black dots from dorsum to the centre of the forewing and in the male an always present black discal spot. The species show sexual dimorphism. The female is much larger with broader forewings and arched costa and usually scarcely patterned. Species belonging to this group all occur East of the Weber Line. Similar patterned species groups occur for instance on Sulawesi (*oberthueri* group of species, figs 4 & 5) and The Philippines (*metarhoda* Walker, 1856, figs 6 & 7) but genitalia study revealed that they are not congeneric with the *niceta* group (figs 31 & 32). The different habitus of the *niceta* group and the peculiar asymmetrical male genitalia justify to differentiate it from all other *Spilosoma* species. There is no genus name available for this group for which I propose the name *Nicetosoma* gen. nov.

Nicetosoma gen. nov.

Type species: *Phalaena Bombyx niceta* Stoll, 1782

The male antennae are serrate, female antennae rather thick filiform.

Species in this genus are quite characteristic in appearance, with pale buff to orange forewings and rose-red hindwings. The only pattern on the forewings are black dots (fig. 1), in the males usually arranged in a postmedial row which can be running from dorsum to costa or interrupted with only a discal spot and two or three dorsal spots or in rare cases be totally absent except for the discal spot. Additionally there is always a small basal and conspicuous subbasal spot present. On the hindwings only a black discal spot is present. The species are sexually dimorphic, the females being much larger with broader forewings and usually more scarcely patterned than males. Entirely unmarked specimens exist as well as specimens with an incomplete postmedial row of dots. The underside is rose-red to red-orange with on each wing a black discal spot.

Most characteristic for this genus are the asymmetrical male genitalia (fig. 2), both valves being different in construction. The right valve is rather simply constructed, similar to the *Spilosoma* type, without any significant processes. The left valve, however, is very peculiar in shape with the cucullus usually shorter than in the right valve and curved with a digitiform distal process. The cucullus is rather constant in shape within the species but the shape and length of the digitiform process is subject to some variation. The tegumen has sclerotized flaps at the base of the uncus. The uncus is broadly based and strongly arched with a narrowing beak-shaped apex. The saccus is wide with less characteristic features. The juxta is also asymmetrical, large and broadly bottle-shaped with a depression at the right side distally. Like most Spilomini the aedeagus bears a carinal plate at the distal rim with one or more teeth (carinae) or remnants of it and which are usually diagnostic.

The female genitalia (fig. 3) also show conspicuous features. The lamella antevaginalis is V-shaped and strongly sclerotized, the rim of the ostium shows diagnostic characters. The lamella postvaginalis however is less pronounced, a narrow rectangular or oval-shaped plate hidden behind the large lamella antevaginalis. The antrum is broad, flattened and strongly sclerotized, the cervix bursae is partly sclerotized and wrinkled in a complex shape and connects with an extremely large sock-shaped appendix bursae. The bursa copulatrix is globular and smaller than the appendix bursae and bears two small bowl-shaped signa varying in size and sclerotization in different species.

Checklist of the *Nictosoma* species with their distribution

- Nictosoma niceta* (Stoll, 1782) comb. nov. [Seram, Ambon, Buru]
Nictosoma saturata (Rothschild, 1910) comb. nov., stat. nov. [Kai Islands]
Nictosoma eogena (Walker, [1865]) comb. nov. [North Moluccas]
Nictosoma meforensis spec. nov. [Numfor Island]
Nictosoma papuana (Rothschild, 1910) comb. nov., stat. nov. [New Guinea]
 intermedia (Rothschild, 1910) syn. nov. [E New Guinea, D'Entrecasteaux
 Islands]
 mysolica (Rothschild, 1915) syn. nov. [Misool]
 pallida (Rothschild, 1916) syn. nov. [Admiralty Islands]
Nictosoma hyporhoda (Butler, 1882) comb. nov. [Bismarck Archipelago]
Nictosoma sulphurata spec. nov. [NE New Guinea]
Nictosoma inexpectata (Rothschild, 1933) comb. nov. [Bismarck Archipelago]
Nictosoma semirosea (Butler, 1887) comb. nov. [Solomon Islands]

List of the collection abbreviations used:

- BMNH - Natural History Museum (former British Museum of Natural History),
 London, United Kingdom
 CMWM - Private collection of Dr. Thomas Witt, assigned to the Zoologische
 Staatssammlung Munchen (ZSM), Germany
 KSP - Koleksi Serangga Papua (private collection of Henk van Mastrikt,
 Jayapura, Papua, Indonesia)
 NCB - Netherlands Centre for Biodiversity Naturalis (former Nationaal
 Natuurhistorisch Museum, Leiden and Zoölogisch Museum Amsterdam),
 Leiden, The Netherlands
 OUMNH - Oxford University Museum of Natural History, United Kingdom
 RMNH - NCB-Naturalis (former Rijksmuseum voor Natuurlijke Historie and
 Nationaal Natuurhistorisch Museum), Leiden, The Netherlands
 ZMAN - NCB-Naturalis (former Zoolögisches Museum Amsterdam), Leiden, The
 Netherlands

Key to the *Nictosoma* species by wing pattern (males)

1. forewings ochreous yellow to orange-yellow without pale venation. 2
 - forewing buff, brownish or with pale venation. 5

2. postmedial row of dots on forewing strong, straight
from dorsum to costa, with discal spot outside this line. *eogena* (fig. 17)
- postmedial row of dots not so strong or incomplete,
discal spot in this row or inside this line. 3
3. postmedial row of dots irregular,
hindwings intensely rose-red *semirosea*. (fig. 29)
- hindwings paler with rose-red dorsal area. 4
4. postmedial row of dots irregular,
discal spot inside this row. *meforensis* (fig. 19)
- postmedial incomplete (two dorsal spots),
in line with discal spot. *hyporhoda* (fig. 21)
5. hindwings yellow, without traces of rose-red. *sulphurata* (fig. 23)
- hindwings with at least traces of rose-red. 6
6. forewing red to brown-orange
with strong pale venation. *inexpectata* (figs 25-27)
- forewing buff or pale brown, with or without pale venation. 7
7. forewing pale brown with pale venation. *papuana* (fig. 15)
- forewing buff, without distinct pale venation:
the species *niceta*, *saturata* and *papuana* f. *intermedia*
can only be identified with certainty by genitalia.
See the male genitalia key. (figs 8-9, 11, 13)

Key to the *Nicetosoma* species by wing pattern (females)

1. forewings ochreous yellow to orange-yellow without pale venation. 2
- forewing buff, brownish or with pale venation. 5
2. postmedial row of dots on forewing almost complete,
not reaching costa, with discal spot outside this line. *eogena* (fig. 18)
- postmedial row of dots not complete,
discal spot in line or inside this line. 3
3. hindwings intensely rose-red,
the postmedial spots out of line with discal spot *semirosea* (fig. 30)
- hindwings paler or orange-red. 4
4. hindwing pale orange-red, discal spot inside
postmedial row (when extrapolated). *meforensis* (fig. 20)
- hindwing bright orange-red, postmedial
spots in line with discal spot. *hyporhoda* (fig. 22)

5. hindwings yellow, without traces of red. *sulphurata* (fig. 24)
 - hindwings rose-red or orange-red. 6
6. forewing brown-orange with strong pale venation. *inexpectata* (fig. 28)
 - forewing buff or pale brown, with or without pale venation. 7
7. forewing pale brown with pale venation. *papuana* (fig. 16)
 - forewing buff, without distinct pale venation. 8
8. hindwing orange-red rather than rose-red *papuana* f. *intermedia* (fig. 14)
 - the species *niceta* and *saturata* can
 only be identified with certainty by
 genitalia. See the female genitalia key. (figs 10, 12)

Key to the *Nicetosoma* species by male genitalia

1. right valva without a (subapical) bulge 2
 - right valve with a more or less pronounced subapical bulge. 4
2. right and left valva broad with broadly rounded apex,
 digitiform process medium sized. *papuana* (fig. 35)
 - both valvae not entirely broad 3
3. both valvae slender with digitiform process medium sized. *niceta* (fig. 33)
 - both valvae broadly based and tapering with
 digitiform process slender club-shaped *inexpectata* (fig. 40)
4. subapical bulge on right valva strong
 followed by a club-shaped apex. 5
 - subapical bulge rather shallow followed by an elongated apex. 7
5. subapical bulge very strong with pronounced
 club-shaped apex, left valva strongly arched with
 digitiform process leaving a short apex. *sulphurata* (fig. 39)
 - apex on left valva longer by more basally
 positioned digitiform process. 6
6. digitiform process thumb-shaped and bend *eogena* (fig. 36)
 - digitiform process slender, not bend *meforensis* (fig. 37)
7. right valva with slender elongated apex,
 left valve with long digitiform process sinuous. *semirosea* (fig. 41)
 - right valve with shorter apex, left valva with long
 slender curved digitiform process 8

8. right valva slender, left valva with short and broad apical part distad from digitiform process. *saturata* (fig. 34)
 - right valva broadly based and tapering, left valva with narrow and longer apical part distad from digitiform process. *hyporhoda* (fig. 38)

Key to the *Nicetosoma* species by female genitalia

1. signa weakly developed 2
 - signa well developed 3
2. chitinous drops in signa fine and very weak. *niceta* (fig. 42)
 - chitinous drops in signa course and stronger than in *niceta*. *saturata* (fig. 43)
3. ostium rim of lamella antevaginalis more or less irregular. 4
 - ostium rim smooth. 6
4. ostium rim strongly irregular, signa with chitinous drops radiating from one side, resembling a pine apple. *eogena* (fig. 45)
 - ostium rim weakly irregular. 5
5. signa strong and kidney shaped *meforensis* (fig. 46)
 - signa bowl-shaped with rather strong chitinous drops *papuana* (fig. 44)
6. sock-shaped appendix bursae narrow and long. 7
 - appendix bursae more globular. 8
7. chitinous drops in signa rather widely spread, ductus to appendix bursae long. *inexpectata* (fig. 49)
 - chitinous drops in signa tiny and densely arranged, ductus rather short. *hyporhoda* (fig. 47)
8. appendix bursae oval shaped, signa with more course drops than next species. *sulphurata* (fig. 48)
 - appendix bursae larger, signa with more numerous fine chitinous drops. *semirosea* (fig. 50)

Nicetosoma niceta (Stoll, 1782) comb. nov. (figs 8-10, 33a-d, 42a-d)

Phalaena Bombyx niceta Stoll (1782: 151)

Arctia eogena Walker ([1865]: 280) [in part]

Diacrisia niceta: Hampson (1901: 317) [in part]; Strand (1919: 205) [in part]; Eecke (1926: 348)

Diacrisia niceta niceta: Rothschild (1910: 152 [in part]; 1914: 250; 1915: 210)

Note: The type of *Phalaena Bombyx niceta* has not been found and is probably lost. However, specimens from the type locality, Ambon Island, have been examined to determine the true identity of *niceta*. This and the next three species are very similar in appearance and can only be separated with certainty by the genitalia. Because of the sympatric occurrence of these species it seems not necessary to designate a neotype for *niceta* Stoll, 1782.

External characters: Fwl. ♂ 19.8-20.3 mm, ♀ 24.7-26.5 mm. (figs 8-10) Male antenna black and serrate. Head and thorax sand-yellow to pale buff. Abdomen red or orange-red with a row of black dorsal spots. Forewing of the same colour as thorax with black spots: one spot at the wingbase, one or two larger subbasal spots and a row of three spots obliquely running from dorsum to the discal spot in the cell (fig. 8) or a complete row of up to seven spots running towards costa (fig. 9). The discal spot and at least two spots at the dorsum are always present in the male, all others are variable in presence. Hindwings orange-red with a rosy-red tinge at the dorsum and with a distinct black discal spot. Underside of wings rose-red fading to orange at the hindmargin (termen). All wings with one black discal spot. Usually the row of black dots on the upperside of the forewing is shimmering through.

Females (fig. 10) with black antenna simple, filiform. Coloration like that of male but with much broader and robust wings. Usually the black pattern is more or less reduced except for the black discal spot on fore- and hindwing and two discal spots on the dorsum of the forewing. The hindwings more evenly coloured orange-red with yellow fringes.

Male genitalia: (prep. RV 1317, BM 3877, BM 3911, BM 3915) (figs 33a-d) Uncus broadly based with a deep groove dorsally and apically with a short, narrow blunt apex. Right valva slender and stretched without any process, in the middle slightly curved inwards. Left valva slender and curved inwards, much shorter than right valva, with narrow and rounded apex. On the inside just before apex with a thumb- or finger-shaped process bearing few long setae. Juxta asymmetrical shield-shaped with the right side apically depressed, the left side with rounded apex. Saccus very wide and short. Aedeagus short and strongly curved, coecum short. Carinal plate with a short and broadly based thorn, usually accompanied by smaller teeth. Vesica with dorsal and ventral lobe more or less trunc-shaped. Dorsal lobe completely scobinated, ventral lobe laterally with a field of tiny cornutal spines.

Female genitalia: (prep. RV 1319) (figs 42a-d) Lamella antevaginalis strongly sclerotized and broad. The ostium rim V-shaped with a smooth rim. The broad antrum heavy sclerotized and with evenly broad cervix bursae fused to the distal

part of it but less sclerotized. Appendix bursae extremely large, more or less sock-shaped. Bursa copulatrix globular with two small signa consisting of a bowl shaped field of small spines which are hardly sclerotized and barely visible.

Distribution: *Nictosoma niceta* has been located on the South Moluccan islands Ambon, Seram and Buru. It may occur also on some other small adjacent islands but this needs confirmation. Very peculiar is the occurrence of *niceta* on Ternate (OUMNH), a small island West of Halmahera. It is right in the middle of the areal of *eogena*. It probably prefers lower altitudes.

Nictosoma saturata (Rothschild, 1910) comb. nov., stat. nov.
(figs 11-12, 34a-d, 43a-d)

Arctia niceta: Pagenstecher (1886: 129) [in part]

Diacrisia niceta saturata Rothschild (1910: 152; 1914: 250); Strand (1919: 205)

Lectotype (designated from syntypes): INDONESIA: ♂, Little Kei, 31.ii.1897, H. Kühn [BMNH].

Paralectotypes (designated from syntypes): INDONESIA: 1 ♂, 1 ♀, Kei Toeal, i-iii.1896, H.C. Webster [BMNH]; 2 ♂♂, 3 ♀♀, Little Kei, ii.1897, H. Kühn [BMNH]; 2 ♂♂, Great Kei, 1887, H. Kühn [BMNH].

External characters: Fwl. ♂ 18.8-20.7mm, ♀ 27.4 mm. (figs 11-12) Externally identical to *niceta*. The specimens are generally smaller and the row of black dots is oblique in a straight line (in *niceta* often curved) and usually not complete (fig. 11). The species can only be distinguished with certainty by the genitalia.

Male genitalia: (prep. RV 1306, RV 1318) (figs 34a-d) Uncus broad with a groove dorsally, apically with a broad blunt apex. Right valva stretched and very slender with the apical half narrowing, in the basal half slightly curved inwards. Left valva slender and curved inwards, much shorter than right valva, with short and broad apical part distad from digitiform process and with rounded apex. On the inside just before apex with a long slender digitiform process bearing setae at its full length. At the apex a little club-shaped and curved inwards. Juxta asymmetrical shield-shaped with the right side apically depressed, the left side with rounded apex. Saccus widely V-shaped and rather deep. Aedeagus short and strongly curved, coecum short. Carinal plate strongly sclerotized with one strong thorn, directed ventro-distally. Vesica with dorsal lobe slightly scobinated. Ventral lobe laterally with a dense field of small cornutal spines.

Female genitalia: (prep. RV 1322) (figs 43a-d) Like in *niceta* but the lamella antevaginalis deeply cut in the V-shaped and rather smooth and rounded ostium

rim. Appendix bursae large, very long. Bursa copulatrix globular with two tiny slightly sclerotized bowl-shaped signa (smaller than in *niceta*) with stronger spines than in *niceta*.

Distribution: *Nictosoma saturata* is found on the Kai Islands.

Nictosoma papuana (Rothschild, 1910) comb. nov., stat. nov.
(figs 13-16, 35a-d, 44a-d)

Diacrisia niceta: Hampson (1901: 317) [in part]

Diacrisia niceta papuana Rothschild (1910: 152; 1914: 250); Strand (1919: 205); Van Eecke (1924: 45); Røber (1925: 186)

Spilosoma niceta papuana: Hampson (1920: 419)

Diacrisia niceta intermedia Rothschild (1910: 153; 1914: 250); Strand (1919: 206)
syn. nov.

Spilosoma niceta intermedia: Hampson (1920: 419)

Diacrisia niceta mysolica Rothschild (1915: 210) syn. nov.

Spilosoma niceta mysolica: Hampson (1920: 419)

Arctia eogena Walker ([1865]: 280) [in part]

Diacrisia niceta pallida Rothschild (1916: 333); Fletcher (1957: 39) syn. nov.

Spilosoma niceta pallida: Hampson (1920: 419)

Lectotype *papuana* (designated from syntypes): PAPUA NEW GUINEA: ♂, Deutsch Neu Guinea, Sattelberg, iii.1906, leg. C. Wahnes [BMNH].

Paralectotypes (designated from syntypes, 15 ♂♂, 25 ♀♀, all in BMNH): PAPUA NEW GUINEA: 9 ♂♂, 13 ♀♀, same as lectotype; 1 ♂, Constantinhafen [Konstantinhafen, nr Bogadjim]; 2 ♂♂, 5 ♀♀, NE British New Guinea, Kumusi River, viii.1907, A.S. Meek; Lower Mambare River, v.1906, A.S. Meek; NW British New Guinea, Biagi, MambarĒ River, 5000 ft, i.1906, A.S. Meek; 1 ♀, British New Guinea, Moroka to Mount Nisbet, i-ii.1896, A.S. Anthony; INDONESIA: 1 ♂, 3 ♀♀, Waigeo, Waterstradt; 1 ♀, Aru Islands, iv-v.1896, H.C. Webster; 1 ♂, 1 ♀, Dutch New Guinea, Dorey [Manokwari], vi.1897, W. Doherty; 1 ♂, 1 ♀, Dutch New Guinea, Fak-Fak, 1700 ft, i-ii.1908, A.E. Pratt.

Lectotype *intermedia* (designated from syntypes): PAPUA NEW GUINEA: ♂, British New Guinea, Milne Bay, i.1899, A.S. Meek [BMNH].

Paralectotypes (designated from syntypes, 8 ♂♂, 22 ♀♀, all in BMNH): PAPUA NEW GUINEA: 2 ♂♂, 6 ♀♀, same as lectotype; 1 ♂, 1 ♀, D'Entrecasteaux Islands, Goodenough Island, xii.1896, A.S. Meek; 1 ♂, 4 ♀♀, D'Entrecasteaux Islands, Fergusson Island, xi.1894-xii.1895, A.S. Meek; 1 ♂, 1 ♀, Trobriand Islands, Kiriwini Island, vi.1895, A.S. Meek; 1 ♂, 4 ♀♀, Louisiade Islands, St. Aignan Island, viii.1897, A.S. Meek; 3 ♀♀, Louisiade Islands, Sudest Island, iv.1898, A.S. Meek; 1 ♂, 1 ♀, Louisiade Islands, Rossel Island, ii.1898, A.S. Meek; INDONESIA: 1 ♀, Suer Mafor [Numfor], v-vi.1897, W. Doherty.

Holotype *mysolica*: INDONESIA: ♀, Misol [Misool Island], Dr. Tauern [BMNH].

Holotype *pallida*: PAPUA NEW GUINEA: ♂, Manus, Admiralty Isl., ix-x.1913, [A.S.] Meek's Expedition [BMNH].

External characters: Fwl. ♂ 17.6-20.2 mm., ♀ 22.7-28.4 mm. (figs 13-16) Similar to *niceta* but with some more variety. Head and thorax buff to yellow-brown. In pale, buff coloured specimens (f. *intermedia*, figs. 13-14) the wings are rather unicolorous without distinct vein pattern, but in darker, yellow-brown, coloured specimens (f. *papuana*, figs 15-16) the veins are much paler than the wing colour. In some female specimens the pattern on the forewing is completely reduced, like in f. *mysolica*, but specimens with a complete black pattern like in the male are rather common.

Male genitalia: (prep. RV 1159, RV 1163, BM 3830, BM 3856, BM 3923, BM 3927, BM 3943) (figs 35a-d) Uncus with a broad base with the beak-shaped apex narrow and blunt. Tegumen has slightly sclerotized flaps. The large juxta asymmetrically trapezium-shaped, slightly depressed at the right side. Saccus widely V-shaped with rounded apex. Right valva short and rather broad, slightly curved inwards, without any processes. Apically with long setae. Left valva shorter than the right one and strongly curved inwards, the broad and rounded apex with long setae. Apically at the inside bearing a digitiform process which is shorter than in *niceta* and variable in shape from slender finger-shaped to thicker thumb-shaped, with long setae. Aedeagus short and strongly curved. Coecum broad and curved upwards. Carinal plate with a spheric ridge with two broadly based thorns and one sharp tooth and a few small blunt teeth but in some species the small teeth are absent. Vesica with dorsal and ventral lobes partly finely scobinated, ventral lobe laterally with field of small cornutal spines.

Female genitalia: (prep. RV 1320) (figs 44a-d) Like in all *Nictosoma* species with a broad and strong lamella antevaginalis but narrower than in *niceta*. The ostium rim V-shaped and somewhat irregular, not smooth as in the typical *niceta*. Antrum and cervix bursae like that of *niceta* but with the appendix bursae larger and longer. Bursa copulatrix globular with two small bowl-shaped signa consisting of strongly sclerotized short spines, one signum more densely arranged with spines than the other.

Distribution: *Nictosoma papuana* is mainly known from the mainland of New Guinea in Papua New Guinea as well as in the Indonesian part but is also found at the Indonesian side on the Aru Islands, the Raja Ampat Islands (Waigeo, Batanta,

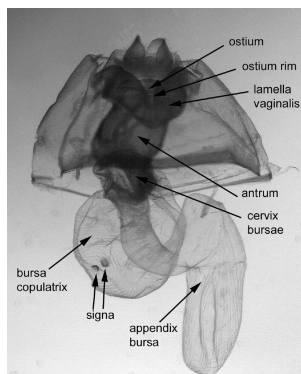
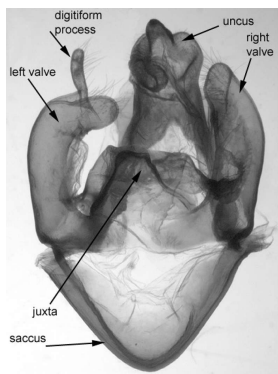
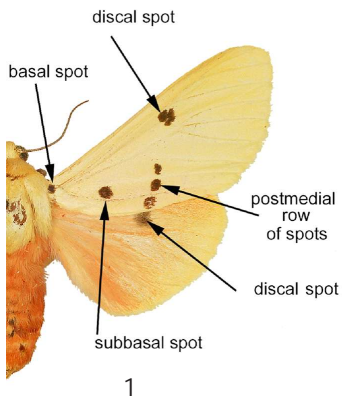
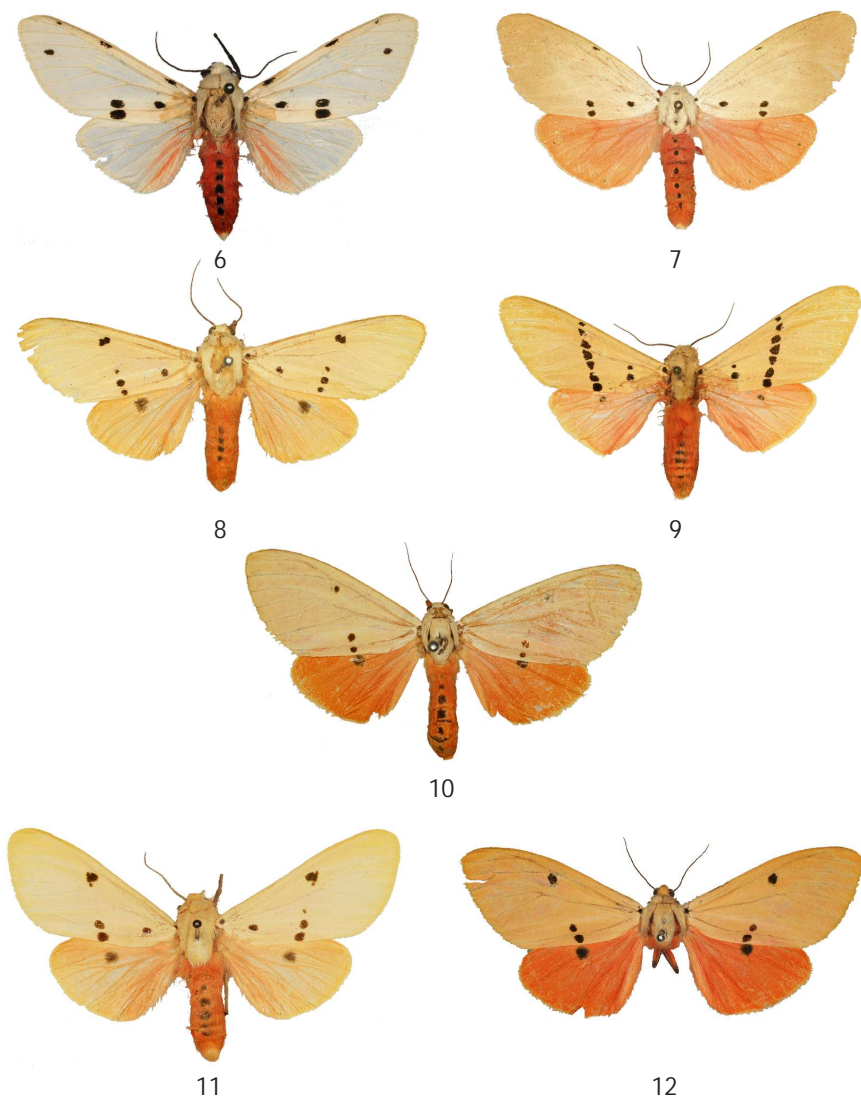


Fig. 1. Wing pattern of *Nicetosoma* species;
 Fig. 2. Male genitalia structures of *Nicetosoma* species;
 Fig. 3. Female genitalia structures of *Nicetosoma* species.
 Figs 4-5. *Spilosoma oberthueri*, Sulawesi [CMWM]: 4. male; 5. female.



Figs 6-7. *Spilosoma metarhoda*, Mindanao (The Philippines) [CMWM]: 6. male; 7. female. Figs 8-10. *Nicetosoma niceta*: 8. male, Ambon [RMNH]; 9. male, Seram, [CMWM]; 10. female, Buru [RMNH]. Figs 11-12. *Nicetosoma saturata*: 11. male holotype, Little Kai [BMNH]; 12. female, Kai Islands [RMNH].



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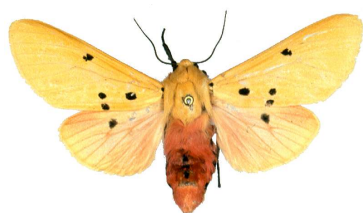


19



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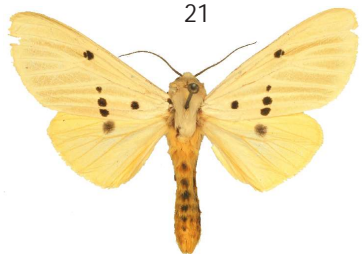
Figs 13-16. *Nicetosoma papuana*: 13. male f. *intermedia*, Tuan Wowi, Birdshead Peninsula (Papua) [ZMAN]; 14. female f. *intermedia*, Morobe (PNG) [CMWM]; 15. male f. *papuana*, Morobe (PNG) [CMWM]; 16. female f. *papuana*, Morobe (PNG) [CMWM]. Figs 17-18. *Nicetosoma eogena*: 17. male, Halmahera [CMWM]; 18. female, Bacan (Batjan) [RMNH]. Figs 19-20. *Nicetosoma meforensis*: 19. male holotype, Numfor [BMNH]; 20. female paratype, Numfor [BMNH].



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Figs 21-22. *Nicetosoma hyporhoda*: 21. male, New Britain [BMNH]; 22. female, Fergusson Island [BMNH]. Figs 23-24. *Nicetosoma sulphurata*: 23. male paratype, Bismarck Mts. (PNG) [CMWM]; 24. female paratype, Mt. Hagen (PNG) [BMNH]. Figs 25-26. *Nicetosoma inexpectata*: 25. male holotype, New Ireland [BMNH]; 26. male, New Ireland [CMWM]. Figs 27-28. *Nicetosoma inexpectata*: 27. male, Talesea, New Britain [BMNH]; 28. female, Talesea, New Britain [BMNH].



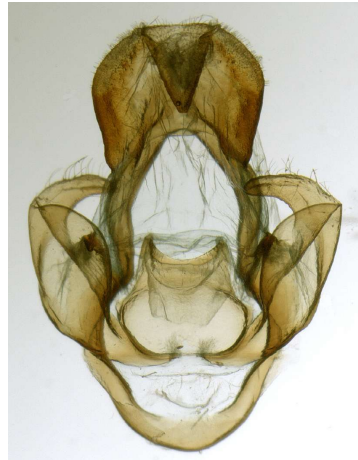
29



30



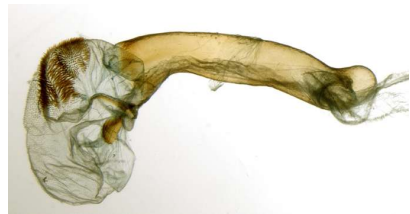
31 a



32 a



31 b



32 b

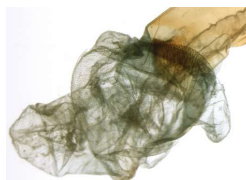
Figs 29-30. *Nicetosoma semirosea*: 29. male, Santa Isabel, Solomon Islands [CMWM]; 30. female, Santa Isabel, Solomon Islands [CMWM]. Figs 31a-b. *Spilosoma oberthueri*, male genitalia (prep. RV1304): 31a. habitus; 31b. aedeagus. Figs 32a-b. *Spilosoma metarhoda*, male genitalia (prep. RV1314): 32a. habitus; 32b. aedeagus.



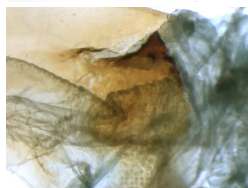
33 a



33 b



33 c



33 d



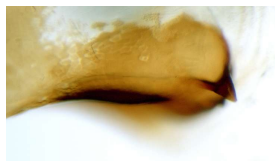
34 a



34 b



34 c

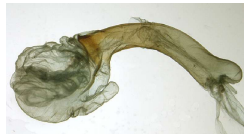


34 d

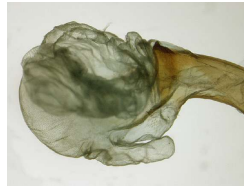
Figs 33a-d. *Nicetosoma niceta*, male genitalia (prep. RV1317): 33a. habitus; 33b. aedeagus; 33c. vesica; 33d. carinae. Figs 34a-d. *Nicetosoma saturata*, male genitalia (prep. RV1306): 34a. habitus; 34b. aedeagus; 34c. vesica; 34d. carinae.



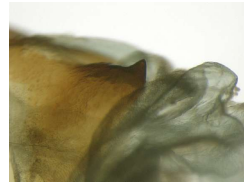
35 a



35 b



35 c



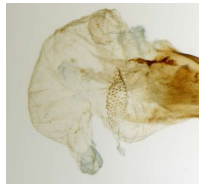
35 d



36 a



36 b



36 c



36 d

Figs 35a-d. *Nicetosoma papuana*, male genitalia (prep. RV1159): 35a. habitus; 35b. aedeagus; 35c. vesica; 35d. carinae. Figs 36a-d. *Nicetosoma eogena*, male genitalia (prep. RV1302): 36a. habitus; 36b. aedeagus; 36c. vesica; 36d. carinae.



37 a



37 b



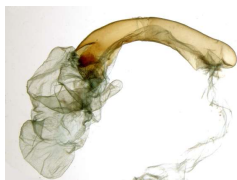
37 c



37 d



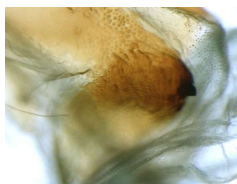
38 a



38 b

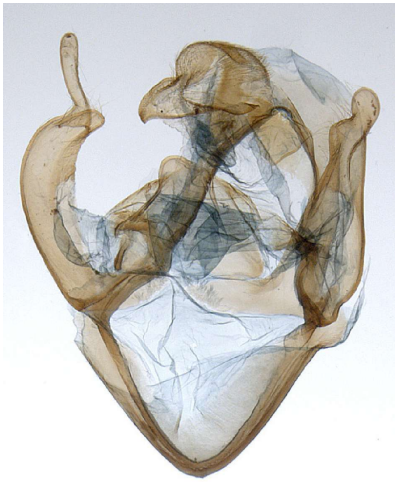


38 c



38 d

Figs 37a-d. *Nicetosoma meforensis*, male genitalia (prep. BM6295): 37a. habitus; 37b. aedeagus; 37c. vesica; 37d. carinae. Figs 38a-d. *Nicetosoma hyporhoda*, male genitalia (prep. RV1316): 38a. habitus; 38b. aedeagus; 38c. vesica; 38d. carinae.



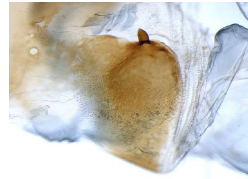
39 a



39 b



39 c



39 d



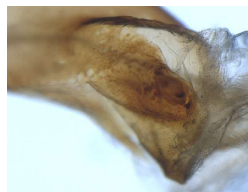
40 a



40 b



40 c



40 d

Figs 39a-d. *Nicetosoma sulphurata*, male genitalia (prep. RV1240): 39a. habitus; 39b. aedeagus; 39c. vesica; 39d. carinae. Figs 40a-d. *Nicetosoma inexpectata*, male genitalia (prep. RV1249): 40a. habitus; 40b. aedeagus; 40c. vesica; 40d. carinae.



41 a



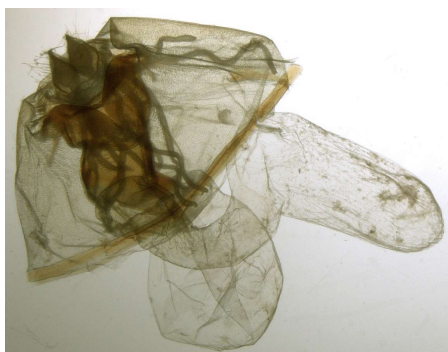
41 b



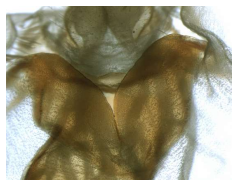
41 c



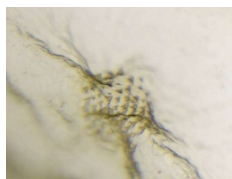
41 d



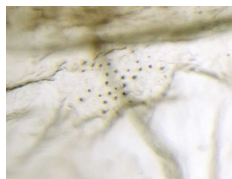
42 a



42 b



42 c

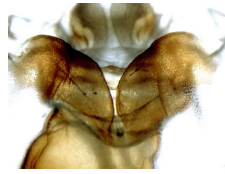


42 d

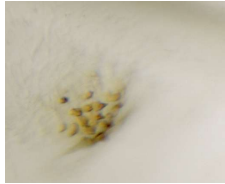
Figs 41a-d. *Nicetosoma semirosea*, male genitalia (prep. RV1315): 41a. habitus; 41b. aedeagus; 41c. vesica; 41d. carinae. Figs 42a-d. *Nicetosoma niceta*, female genitalia (prep. RV1319): 42a. habitus; 42b. lamella vaginalis and ostium; 42c. signum 1; 42d. signum 2.



43 a



43 b



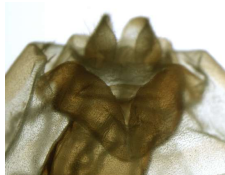
43 c



43 d



44 a



44 b

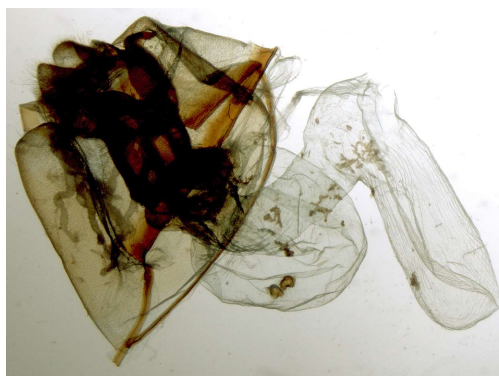


44 c

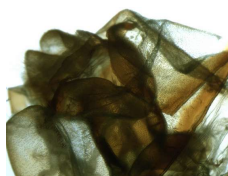


44 d

Figs 43a-d. *Nicetosoma saturata*, female genitalia (prep. RV1322): 43a. habitus; 43b. lamella vaginalis and ostium; 43c. signum 1; 43d. signum 2.
 Figs 44a-d. *Nicetosoma papuana*, female genitalia (prep. RV1320): 44a. habitus; 44b. lamella vaginalis and ostium; 44c. signum 1; 44d. signum 2.



45 a



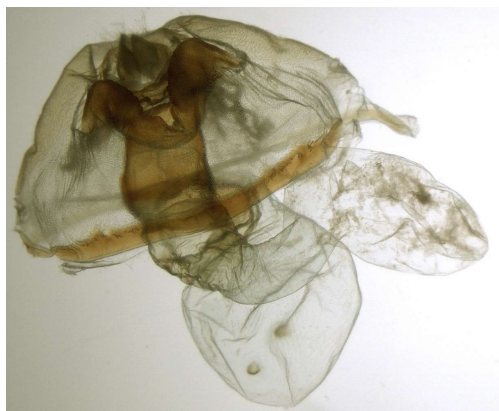
45 b



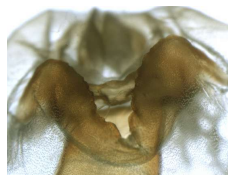
45 c



45 d



46 a



46 b



46 c

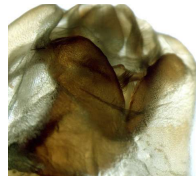


46 d

Figs 45a-d. *Nicetosoma eogena*, female genitalia (prep. RV1321): 45a. habitus; 45b. lamella vaginalis and ostium; 45c. signum 1; 45d. signum 2.
Figs 46a-d. *Nicetosoma meforensis*, female genitalia (prep. BM6296): 46a. habitus; 46b. lamella vaginalis and ostium; 46c. signum 1; 46d. signum 2.



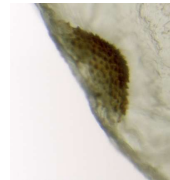
47 a



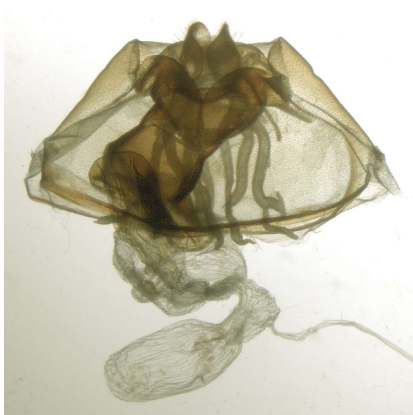
47 b



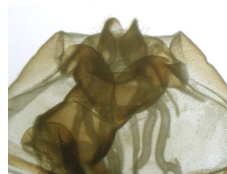
47 c



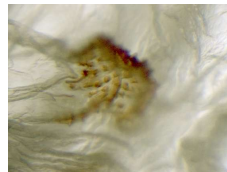
47 d



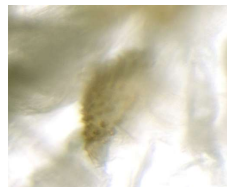
48 a



48 b



48 c

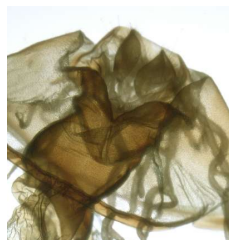


48 d

Figs 47a-d. *Nicetosoma hyporhoda*, female genitalia (prep. BM6292): 47a. habitus; 47b. lamella vaginalis and ostium; 47c. signum 1; 47d. signum 2.
 Figs 48a-d. *Nicetosoma sulphurata*, female genitalia (prep. BM6294): 48a. habitus; 48b. lamella vaginalis and ostium; 48c. signum 1; 48d. signum 2.



49 a



49 b



49 c



49 d



50 a



50 c



50 d

Figs 49a-d. *Nicetosoma inexpectata*, female genitalia (prep. BM6293): 49a. habitus; 49b. lamella vaginalis and ostium; 49c. signum 1; 49d. signum 2.
Figs 50a,c, d. *Nicetosoma semirosea*, female genitalia (prep. WT17290): 50a. habitus (severely damaged); 50c. signum 1; 50d. signum 2.

Salawati), Misool, the eastern Schouten Islands (Biak, Yapen), and at the PNG side on Yule Island, the D'Entrecasteaux Islands, Trobriand Islands, the Admiralty Islands and other adjacent islands. Specimens from Manus (Admiralty Islands) are generally smaller than those from the mainland but this is a common feature on small islands (island forms). The species occurs from sea level up to 1800 meters but is most common at lower altitudes.

Nictosoma eogena (Walker, [1865]) comb. nov.

(figs 17-18, 36a-d, 45a-d)

Arctia eogena Walker ([1865]: 280) [in part]

Areas hyporrhoda [sic]: Pagenstecher (1900: 50) [nec Butler, 1882, in part]

Diacrisia niceta: Hampson (1901: 317) [in part]

Diacrisia niceta eogena: Rothschild (1910: 152); Strand (1919: 205)

Diacrisia niceta eogene [sic]: Rothschild (1914: 250)

Lectotype *eogena* (designated from syntypes): INDONESIA: ♀, Bac. [Bacan], Wallace, "B Walker's type of *Arctia eogena* 31-280", [OUMNH].

Note: Walker [1865] mentioned in his original description specimens from five localities: "Batchian, Ceram, Gilolo, Mysol, Ternate". The specimens from "Ceram" (♂) and "Ternate" (♂) refer to *Nictosoma niceta* s.s. the "Mysol" specimen (♀) refers to *N. papuana*, those from "Batchian" (♀) and "Giloli" (♀) refer to *N. eogena*. The 'Batchian' specimen was the first mentioned and represents a true *eogena*, which consequently is, in tradition of designations of Walker's types, the only (lecto)type of the series (see De Vos, 2002: 27). To avoid confusion with the other (syn)types they are not designated as paralectotypes, although only the female from "Gilolo" could be considered to be a paralectotype of *eogena*.

External characters: Fwl. ♂ 19.1-19.7mm., ♀ 22.1-26.1 mm. (figs17-18) The black antenna in male serrate with longer pecten than in *niceta* and related species. The base of the antenna ochreous yellow, like the head, thorax and forewings. Abdomen rose-red with a row of black strong dorsal dots on the four middle segments. Black pattern on forewings in male with two strong subbasal dots, sometimes accompanied by two tiny spots forming the subbasal fascia. The postmedial fascia consists of a complete straight row of strong black dots which makes a 90° angle with the dorsum. The black discal spot at the end of the cell is outside this line. Hindwings at the base and dorsum rose-red fading to ochreous yellow distally. A black discal spot is always present.

Female with much broader forewings. Antenna black and filiform. Head, thorax and forewings ochreous yellow. Abdomen red to orange-red with black dorsal dots on the distal half. A black dot at the very base of the forewing and two

subbasal dots. The postmedial row of black dots straight and starts at the dorsum but ends with a last tiny dot just above the cubital vein. The large discal spot at the end of the cell is outside this row. Hindwing entirely orange-red with ochreous fringes.

Male genitalia: (prep. RV 1302, BM 3819, BM 3891) (figs 36a-d) Uncus beak-shaped, dorsally with a sharp V-shaped groove which runs to the broad and rounded apex. Right valva broadly based and gradually narrowing but with a subapical bulge at the inside followed by a narrow distal part with a rounded apex, which is slightly bend inwards. Left valva more narrow than right one and strongly curved inwards, much shorter than right valva, with rounded and bend apex. On the inside before the apex with a bend thumb-shaped process with short setae. Juxta broad and triangular with the right side laterally depressed which curves the entire juxta to the left. Apex of juxta rounded. Saccus deeply V-shaped. Aedeagus short and strongly curved, coecum broadly based and short. Carinal plate with a sclerotized ridge with some small teeth and distally two larger ones. Vesica with dorsal lobe entirely scobinated. Ventral lobe laterally with a field of small cornutal spines but more spread than in *niceta* and related species.

Female genitalia: (prep. RV 1321) (figs 45a-d) Lamella antevaginalis strongly sclerotized and rather narrow compared to other species. The ostium rim deeply V-shaped and irregular undulated. The antrum very broad and heavy sclerotized. Appendix bursae large, globular and almost of equal size of bursa copulatrix. Bursa copulatrix globular with two small bowl-shaped signa which are consisting of moderately sclerotized chitinous drops, radiating from one point resembling a pine apple.

Distribution: *Nictosoma neogena* is distributed on the North Moluccan islands of Halmahera, Bacan and Morotai and possibly also some other adjacent islands. The position of the adjacent Ternate is peculiar since only *Nictosoma niceta* is known from this island.

Nictosoma meforensis spec. nov. (figs 19-20, 37a-d, 46a-d)
Diacrisia niceta intermedia Rothschild (1910: 153) [in part: Numfor]

Holotype: INDONESIA: 1 ♂, Dutch N. Guinea, Mefor Island [Numfor], Geelvink Bay, 15.viii-10.ix.1920, C., F. & J. Pratt [BMNH].

Paratypes: INDONESIA: 1 ♀, same as holotype [BMNH]; 1 ♀ [former syntype of *intermedia* Rothschild, 1910] Suer, Mefor, v-vi.1897, W. Doherty [BMNH]; 1 ♂, Numfor, Namber, Transek II, 26.vii.2005, leg. Mahasiswa-UNCEN [KSP].

External characters: Fwl. ♂19.8-22.0 mm., ♀ 25.9 mm. (figs. 19-20) Antenna in male serrate, dark brown. Head and thorax dark ochreous yellow with a pinkish tinge. Abdomen rose-red with laterally and dorsally a row of black dots. The ground colour of the forewing is ochreous yellow. The black dot pattern similar to that of complete patterned *papuana* but with the row of dots slightly irregular and not in line with the discal spot but running slightly distad, resulting in a double discal spot. The black discal spot on the hindwing large. Hindwings for the greater part ochreous yellow but at dorsum fainting in rose-red.

Females much larger with broad rounded forewings. Ground colour like in the male ochreous yellow but usually much brighter and with a row of three black dots from the dorsum and with another black spot next to the discal spot. Usually with a black subbasal spot. Black discal spot on the rose-red hindwing large.

The species resembles the North Moluccan *Nicetosoma eogena* with its ochreous yellow ground colour, but in that species the row of black dots is more pronounced and running basad of the discal spot.

Male genitalia: (prep. BM 6295) (figs 37a-d) Uncus with a broad base and with the beak-shaped apex tapering and blunt. Tegumen has slightly sclerotized flaps. The juxta asymmetrically trapezium-shaped, but almost triangular because of the more narrow apex, depressed at the right side. Saccus widely V-shaped with rounded apex. Right valva much more slender than in *papuana* with a constricted apical part, leaving a thumb-shaped apex. Left valva shorter than the right one and strongly curved inwards, the apex spoon-shaped. Left valva apically at the inside with a slender and straight club-shaped process. Aedeagus short and strongly curved with broad coecum. Carinal plate with a strong sclerotized distal part with two thorns of which the distal one is the largest. Vesica delicately scobinated, ventral lobe laterally with a field of small cornutal spines.

Female genitalia: (prep. BM 6296) (figs 46a-d) Lamella antevaginalis broad and strongly sclerotized. Ostium rim V-shaped and slightly irregular. Antrum and cervix bursae broad and strongly sclerotized like in *niceta* and others. Appendix bursae large and long, sock-shaped. Bursa copulatrix globular with two large well developed kidney-shaped signa consisting of strongly sclerotized short spines.

Distribution: *Nicetosoma meforensis* has only been found on the island of Numfor in the northern Cenderawasih Bay of Papua, Indonesia.

Etymology: The species is named after Mefor, one of the older names which were in use for the island of Numfor. A comprehensive overview of historical names of Numfor and other islands of the Cenderawasih Bay is published by Van Mastrigt (2010).

Nictosoma hyporhoda (Butler, 1882) comb. nov.

(figs 21-22, 38a-d, 47a-d)

Areas hyporhoda Butler (1882: 159)

Rhodareas hyporrhoda [sic]: Kirby (1892: 254)

Areas hyporrhoda [sic]: Pagenstecher (1900: 50) [in part]

Diacrisia niceta: Hampson (1901: 317) [in part]

Diacrisia niceta hyporhoda [sic]: Rothschild (1910: 152)

Diacrisia niceta hyporhoda: Rothschild (1914: 250); Strand (1919: 205)

Holotype: PAPUA NEW GUINEA: ♀, Duke-of-York Island, 82-80 [BMNH].

External characters: Fwl. ♂ 20.7-23.0 mm., ♀ 24.5-29.0 mm. (figs 21-22) Similar to *niceta* except for the head, thorax and forewings being ochreous yellow instead of buff in both male and female. The black dot pattern is identical to *niceta* and *papuana*.

Male genitalia: (prep. RV 1316 (New Britain), BM 3826 (Admiralty Islands); BM 3846 (Bougainville), BM 3860 (New Ireland), BM 3870 (New Hannover), BM 3903 (Goodenough Island), BM 3907 (Sudest Island), BM 3919 (Witu Island); BM 3939) (figs 38a-d) Uncus broadly based, dorsally rounded, apically beak-shaped and gradually tapering with a rather sharp apex. Right valva stretched and very slender with the apical third narrowing, the basal two-third slightly curved inwards. Left valva slender and strongly curved inwards, much shorter than right valva, with rounded apex. On the inside before the apex with a long slender digitiform process with setae at its full length and slightly curved inwards. Juxta asymmetrical trapezium-shaped with the right side apically depressed, the left side with rounded apex. Saccus widely V-shaped and rather deep. Aedeagus short and strongly curved, coecum short, hardly differentiated. Carinal plate strongly sclerotized and usually with some small teeth and always with one larger sharp tooth. Vesica with all lobes entirely scobinated. Ventral lobe laterally with a dense field of small cornutal spines.

Female genitalia: (prep. BM 6292) (figs 47a-d) Lamella antevaginalis broad and strongly sclerotized with rather smooth V-shaped ostium rim, at the

innerside slightly irregular undulated. Antrum rather short and broad and like cervix bursae strongly sclerotized. Appendix bursae rather long and broad, sock-shaped. Bursa copulatrix globular with two small well developed bowl-shaped signa consisting of strongly sclerotized tiny spines which are densely arranged.

Distribution: *Nicetosoma hyporhoda* is recorded from the Bismarck Archipelago on New Britain, New Ireland, Duke of York Island, Dampier Island (Karkar), Admiralty Islands, St. Aignan, D'Entrecasteaux Islands, Goodenough Island and Fergusson Island.

Nicetosoma sulphurata spec. nov. (figs 23-24, 39a-d, 48a-d)

Holotype: PAPUA NEW GUINEA: ♂, Papua New Guinea, Goroka [Bismarck Mountains], 5.iv.1979, LF. [Leuchtfang = at light], det. Roland Müller, Prep. RV 1240 [RMNH].

Paratypes: PAPUA NEW GUINEA: 1 ♂, same as holotype [RMNH]; 8 ♂♂, Papua New Guinea, Bismarck Mountains, Goroka, leg. Vomocil, 10.iii.1975 [1 ♂], 12.iii.1975 [1 ♂], leg. Jares, 1.ii.1978 [4 ♂♂], 20.ii.1978 [1 ♂], 8.iii.1978 [1 ♂] [CMWM]; 1 ♂, 1 ♀, Papua New Guinea, West. High. Province, Kuk A.R.S., Mt. Hagen, 29.vi.1981, Larva feeding on foliage of winged beans, leg. T. Solulu [BMNH].

External characters: Fwl. ♂ 19.7-21.6 mm., ♀ 26.6 mm. (figs 23-24) Antenna black, serrate. Head and thorax buff, sometimes mixed with ochreous-yellow or pinkish. Abdomen ochreous-yellow with a row of dorsal and lateral black dots. Forewings pale buff with black dot pattern like in *niceta*, a subbasal dot and an incomplete postmedial row of black dots, three at the dorsum, one at the end of the cell at the subcostal vein distad of the discal spot. Some specimens with faint pale brown streaks between the veins, others entirely unmarked with a buff ground colour. Hindwings bright sulfur-yellow with a black discal spot.

Underside of fore- and hindwings ochreous-yellow with on both wings a black discal spot. The black spots on the upperside of the dorsum are faintly shining through.

Female much larger with broader wings. In the only female known generally with the same habitus as male but with reduced black pattern on the forewing, leaving a tiny spot on the left forewing (right wing without pattern), but obviously this is a variable feature.

Male genitalia: (prep. RV 1240) figs. 39a-d) Uncus broadly based, dorsally rounded without groove, broadly beak-shaped with a sharp bend down apex resembling the beak of an eagle. Right valve short, rather broadly based and gradually narrowing distally, with apical part twisted into a complex bulge with short and rounded apex. Left valve only slightly shorter than right valve, rather broad and curved inwards with short and rounded apex. At the inside of apex with a digitiform club-shaped process. Juxta broadly trapezium-shaped, apically depressed at right side. Saccus widely V-shaped. Aedeagus short, at distal third strongly curved, coecum short. Carinal plate strongly sclerotized with one small erect thorn. Vesica with dorsal and distal lobes scobinated, ventral lobe laterally with a field of small cornutal spines.

Female genitalia: (prep. BM 6294) (figs 48a-d) Lamella antevaginalis broad and oval shaped with rounded and smooth V-shaped ostium rim. Antrum rather short and broad and like cervix bursae strongly sclerotized. Ductus seminalis long, appendix bursae globular oval shaped and rather small compared with other related species. Bursa copulatrix rather small and globular with irregular shaped signa consisting of sclerotized course spines.

Distribution: The species has only been found in the Bismarck Mountains in the Western Highlands Province and Eastern Highland Province in the Northeast of Papua New Guinea. As mentioned in the type labels the larvae are known to feed on "Winged beans" (*Psophocarpus tetragonolobus*), a member of the Fabaceae.

Etymology: The species is named after the sulfur-yellow ground colour of the hindwings.

Nictosoma inexpectata (Rothschild, 1933) comb. nov.

(figs 25-28, 40a-d, 49a-d)

Spilosoma inexpectata Rothschild (1933: 178)

Holotype: PAPUA NEW GUINEA: ♂, New Ireland, i.1924, A.F. Eichhorn, [BMNH].

External characters: Fwl. ♂ 22.6-22.7mm., ♀ 28.1 mm. (figs 25-28) Male antenna black, serrate. Head and thorax orange, in holotype patagia and tegulae in the centre velvet black but this is exceptional. In most specimens without black centre. Tegulae and thorax with cream coloured patches, in holotype the tegulae and thorax for the greater part cream coloured (except for the black centre), but again this is exceptional. Abdomen rose-red with four black dorsal spots in the middle part.

Forewing with ground colour orange to orange-brown and with the veins conspicuously accentuated by broad cream coloration, fringes yellow. A basal black dot at the costa. Subbasally a transverse row of two or three black dots and a postmedial oblique transverse row of black dots which might be complete or interrupted at the cubital vein.

Hindwing rose-red with an orange tinge marginally. Fringes yellow. A black discal spot.

Female with head and thorax orange without black markings. Abdomen rose-red with a row of black dorsal and lateral spots. Forewings broad with ground colour orange, veins accentuated with pale orange or yellow. Two strong black subbasal spots and a row of three strong spots running from dorsum to the cubital vein basad of the small black discal spot at the end of the cell. Hindwings rose-red with orange fringes and a small black discal spot.

Male genitalia: (prep. RV 1249) (figs 40a-d) Uncus broadly based and beak-shaped with a triangular blunt apex. Tegumen has slightly sclerotized broad flaps at the base of the uncus gradually fainting into soft tissue. Juxta asymmetrical heart-shaped with a depression at the right side. Saccus elongate V-shaped with a rounded apex. Right valva rather long, from base to apex gradually narrowing and slightly curved inwards, rounded apex with few long setae. Left valva shorter than right valva, broadly based and narrowing towards apex, strongly curved inwards, apex of valva rounded with setae. Left valva distally at inside with a long narrow digitiform process with a spoon-shaped apex, process scarcely covered with long setae. Aedeagus short and strongly curved almost forming half a circle. Coecum broad and curved upwards. Carinal plate with a ridge of a few blunt teeth and knobles. Vesica with all lobes scobinated, ventral lobe at right side laterally with a large dense field of coarse cornutal spines.

Female genitalia: (prep. BM 6293) (figs 49a-d) Lamella antevaginalis broad with smooth V-shaped ostium rim. Antrum very broad and strongly sclerotized. Ductus seminalis long, appendix bursae very long sock-shaped. Bursa copulatrix rather small and globular with two small well developed bowl-shaped signa consisting of rather widely spread chitinous drops.

Distribution: The species is restricted to the larger islands of the Bismarck Archipelago, New Ireland and New Britain. On both islands the habitus of the specimens is somewhat different (pale veins strongly accentuated in New Ireland (figs 25-26) and less pronounced and darker in New Britain (figs 27-28)) which might indicate that they belong to different subspecies. This should be investigated in the future when more material is available.

Nictosoma semirosea (Butler, 1887) comb. nov.

(figs 29-30, 41a-d, 50a-c)

Areas semirosea Butler (1887: 217)*Diacrisia niceta*: Hampson (1901: 317) [in part]*Diacrisia niceta semirosea*: Rothschild (1910: 152; 1914: 250); Strand (1919: 205); Fletcher (1957: 39)

Holotype: SOLOMON ISLANDS: ♂, Solomon Is., Alu, 87.3 [iii.1887], C.M. Woodford [BMNH].

External characters: Fwl. ♂ 19.2-20.7mm., ♀ 20.7-26.7 mm. (figs 29-30) Black antenna serrate with rather long pecten. Head and thorax ochreous yellow, abdomen rose-red with a row of black dorsal and lateral spots. The ochreous-yellow colour and wing pattern resembles somewhat that of *Nictosoma eogena* and *meforensis* except that there is only one subbasal black spot and in males the postmedial row of dots is usually in line with the discal spot, in the most complete appearance (3-4) it runs from dorsum to just below the cubital vein. This postmedial row of dots is slightly sinuous with dots of variable size, the discal spot is the largest and last one in the row. Hindwings rose-red with ochreous yellow fringes and a large discal spot. Females with broader forewings and with the postmedial row of dots reduced to only two small spots on the dorsum. The hindwings with an equal large discal spot as in male.

Male genitalia: (prep. RV 1315, BM 3815, BM 3822, BM 3931, BM 3935) (figs 41a-d) Uncus broadly based with a shallow and rounded groove dorsally, the apex of uncus rather broad and blunt. Juxta bottle-shaped with a depression at the right on the apex. Saccus widely V-shaped with a rounded apex. Right valva slender and long, in the middle slightly broadening and with distal third digitiform and slightly curved inwards. Left valva much shorter than right valva, broadly based and narrowing and curved inwards. Distally with a long and slender digitiform sinuous process which is variable, in one specimen the process was thicker but equally long as others. Aedeagus short and curved. Coecum short and curved upwards. Carinal plate with one or two blunt teeth, if two are present one is much larger than the other. Vesica with all lobes scobinated, ventral lobe at right side laterally with a dense field of cornutal spines.

Female genitalia: (prep. WT 17290) (figs 50a,c, d) As an unfortunate coincidence the only female abdomen of this specimen which was examined was for the major part destroyed by the mail. The genital slide shows the remains of it (fig. 50a). The lamella antevaginalis and the ostium rim are not

visible anymore, a part of the broad and sclerotized antrum is still partly visible. The appendix bursae is large and sock-shaped. The bursa copulatrix is globular and large with two well developed large bowl-shaped signa, consisting of fine sclerotized spines.

Distribution: *Nictosoma semirosea* occurs on almost every island in the Solomon Islands, starting from Bougainville Island to Guadalcanal and Rennell Island.

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