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Description of a New Genus and Five New Species of Nolinae from Thailand. Investigations on Asian Nolidae III *

(Lepidoptera, Nolidae)

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Abstract

A new Noline genus, *Porcellanola* **gen. nov.**, and five new species, *Porcellanola. minna*, *P. chakri*, *P. lanna*, *P. sukhothai* and *P. thai* **spp. nov.**, are described from North Thailand. With 19 figures.

Key words: Nolinae, *Porcellanola*, new genus, new species, North Thailand.

Zusammenfassung

Eine neue Gattung der Nolinae, *Porcellanola* **gen. nov.**, wird mit fünf neuen Arten, *Porcellanola minna*, *P. chakri*, *P. lanna*, *P. sukhothai* und *P. thai* **spp. nov.**, aus Nord-Thailand beschrieben (mit 19 Abbildungen).

Introduction

As a result of the general revision of the east and south-east Asian Nolinae, a group of very attractive and comparatively bright species was recognized. The authors found to their great surprise that all five species involved in the group are still undescribed and belong to a genus which is clearly distinguishable from all other known Nolinae genera. The appearance of five conspicuous new species from a rather restricted area was comple-

* This is the third paper dealing with taxonomical problems of the family Nolidae (Lepidoptera). (2nd paper: Entomofauna 26 / 2005 (11): 205-224)

tely unexpected.

There was an obvious chance that these species, resembling certain taxa of other Nolinae and Noctuidae subfamilies (Chloephorinae, Sarrothripinae and Acontiinae), have already been described and misplaced into these above-mentioned subfamilies. The most time-consuming part of the determination of the new genus and its species was to check the possible overlap between our new Noline species and the externally more or less similar south-east Asian Chloephorinae, Sarrothripinae and Acontiinae taxa. Finally, we concluded that our material contains five new species of a new genus.

In our opinion, the main possible reasons of the late discovery of these beautiful creatures are as follows: The species of the genus are generally rare and their collecting is rather difficult. All five species are on the wing during the winter (beginning of November to beginning of February), inhabiting the medium-high and high primary forest zones of the easternmost chains of the Himalayas, between 1250 and 2100 m elevation. These elevations are usually the highest accessible sites for the collecting in these areas where the weather is most often markedly cool in this period, sometimes with frost in the nights. The moths are attracted to the light, but almost all specimens were observed at the illuminated screen and were collected only exceptionally by small portable light traps.

Abbreviations

BMNH = The Natural History Museum, London;
HNHM = Hungarian Natural History Museum, Budapest;
MWM = Museum WITT, Munich;
LGN = Nolidae genital slide of László M. GYULA;
W = slide of the WITT Museum, Munich.

***Porcellanola* gen. nov.**

Type species: *Porcellanola minna* sp. nov.

Diagnosis. The new genus is rather remote from all described genera of the subfamily. *Porcellanola* resembles externally certain species of the very diverse (and supposedly polyphyletic) genus *Aquita* WALKER, 1863 (e.g. *A. acontioides* (WALKER, 1862) and *A. ectrocta* (HAMPSON, 1907), etc.) by its shiny, "porcelain white" ground colour and brownish terminal area of the forewing, but differs from them by the more strongly marked, broader crosslines and the greyish-bluish suffusion of the subterminal area, which is absent in the similar species of *Aquita*. The basic structure of the male genitalia of the species of the new genus displays a somewhat closer relationship with *Meganola* DYAR, 1898, but obviously differs in the following features: The valva of *Porcellanola* is always much shorter, apically strongly broadened with rounded margin, while that of *Meganola* is much more elongate, narrower, apically not or less broadened. The fultura inferior of the new genus is rather variable in its shape varying from a simple quadrangular plate to a large, dorsally (apically) bifurcate structure, while that of *Meganola* is very simple, short, usually rounded-elliptical or cup-shaped.

The new genus forms a rather compact, easily distinguishable group within the subfamily. It has two groups of species represented by twin species. The fifth species (*P. lanna*) is somewhat transitional between these two groups, being closer to the hypothetical ancestor of the genus. The *P. minna*-group (*P. minna* and *P. chakri*) is characterised by the

long dorso-lateral arms of the fultura inferior and the entire reduction of the serrate dorso-lateral bar of the carina; the male genitalia of the species of the *P. thai*-group (*P. thai* and *P. sukhothai*) have small rounded quadrangular fultura inferior with acute ventro-medial process and well-developed serrate dorso-lateral bar of the carina. The male geni-talia of *P. lanna* are closer to those of the *P. thai*-group but with long, acute, dorso-lateral extension of the carina while it is confusingly similar in external features to the taxa of the *P. minna*-group.

Description. Wingspan 14-19 mm, length of forewing 7-10 mm. Head relatively small, frons, vertex, collar, tegulae and metathorax covered with bright white hair-scales. Palpi medium-long, slender, covered with blackish-brown scales, tip of third segment sometimes whitish. Male antenna ciliate, with long, dense cilia; female antenna filiform with sparse, short ciliation. Forewing narrow, elongate or relatively broad with finely pointed apex and evenly arcuate outer margin. Ground colour bright, shining porcelain white, sometimes with bluish-grey sheen; dark markings most often black; stigmata absent. Basal half generally white, with a few dark markings only. Basal dash relatively short, straight or distally finely arched. Basal line a small, black costal patch, antemedial line represented by a shorter or longer black stripe running from costa to lower edge of cell, fused partly with tip of basal dash. Medial line sharply defined, straight or wavy, upper part oblique, with strong, triangular black costal patch being often filled with blueish-grey scales; then angled inwards and fused with lower half of postmedial line, this common section may be straight or strongly sinuous. Upper part of postmedial line strongly arched, angled inwards to middle of discoidal cell, enclosing a conspicuous, rounded, white area. Subterminal line less strong and less sharply defined, more or less interrupted, strongly sinuous; area between postmedial and subterminal lines usually suffused by dark bluish-grey (rarely also by brown) scales. Terminal line evenly arcuate, interrupted, consisting of a fine greyish-white line followed by elongate dark dots; area between subterminal and terminal lines usually reddish-brown. Cilia long, brown, chequered with dark grey. Hindwing pale grey with somewhat darker outer margin, veins slightly darker; transverse line and discal spot absent. Underside of wings shining dark grey, traces of crosslines poorly visible.

Male genitalia (Figs 7-16). Uncus medium-long, acute, medial section strongly setose dorsally, apex hooked. Tegumen relatively short, broad; fultura inferior is either large, quadrangular with long dorso-lateral arms or much smaller, rounded-quadratic with single, slender, pointed ventro-medial process. Vinculum well-developed, rather strong and short, U- or V-shaped. Valva with relatively narrow proximal and conspicuously broadened distal half, apical part broadly rounded, ventral edge finely lobate. Sacculus relatively short, its ventral part sclerotized, clavus reduced; basal part of costa and transtilla also sclerotized. Harpe-ampulla complex most often form a virtually fused structure although separate basal plates and apical processi are clearly distinct in one species (*P. thai*). Harpe well developed, flattened, with fine medio-lateral extensions and finer or stronger, cuneate apical process. Ampullar plate flat, medium-strong, with strong, variably curved ampulla. Aedeagus short, carina may be armed with an acute, dentate dorso-lateral process (*P. lanna*), or a dentate bar (*P. thai* and *P. sukhothai*) or even simple; vesica without cornuti.

Female genitalia (Figs 17, 18, 19). Ovipositor relatively short, papillae anales conical or quadrangular; apophyses posteriores medium long. Eighth tergite conspicuously short, ribbon-like; eighth sternite relatively large, strongly sclerotized, trapezoidal or calyculate; apophyses anteriores very short. Ostium bursae strongly sclerotized, rather large, somewhat funnel-shaped or rounded quadrangular. Ductus bursae shorter or longer, membra-

nous; cervix bursae relatively large, weakly membranous. Corpus bursae elliptical-ovoid or saccate; signa absent but finely scobinate plates may be present.

Bionomics and distribution. The taxa of the genus are typical members of the Himalayan winter fauna, inhabiting mesomontane and montane rainforest regions. The first specimens appear at the end of the monsoonic wet season in northern Thailand. The last known observations are known from the beginning of February, about two months before the next rain season usually begins.

The early stages and the foodplant of the *Porcellanola* species are unknown. The moths are attracted to light, their behaviour (flight, movement on the sheet, resting position) is typically noline.

***Porcellanola minna* sp. nov.** (Figs 1, 7, 8, 17)

Holotype male: "Thailand, Changwat Nan, 30 km E of Pua, 1700 m, 13.XI.1999, leg. Márton Hreblay"; slide No. LGN 882 = W 8297 (MWM).

Paratypes. Thailand: 1 male, same site, but collected 10.XI.1999. Slide LGN 886 = W 8301; 1 male, 3 females, Prov. Chiang Mai, Mt. Doi Phahompok, 18 km NW of Fang, 2100 m, 15.XI.1999, leg. M. HREBLAY, genitalia slides LGN 883 = W 8298 (male), LGN 884 = W 8299, LGN 885 = W 8300 (females) (MWM).

Diagnosis: The new species is hardly distinguishable externally from its twin species, *P. chakri*, and another member of the genus, *P. lanna*. The external differences between these three species are as follows: The ground colour of forewing of *P. minna* and *P. lanna* is clear bright white, while that of *P. chakri* has bluish-grey shade in the ventral half. The subterminal area of the forewing of *P. minna* is bluish-grey, with somewhat more blue sheen in *P. chakri*, while that of *P. lanna* is brownish-grey. The connection of antemedial line to basal dash forms a flat angle in *P. minna*, this connection is more or less rectangular in *P. chakri* and *P. lanna*. The costal patch of the forewing of *P. minna* and *P. chakri* is reversed triangular, filled with bluish-grey scales, while that of *P. lanna* is semicircular, bright white. The outer white area of the forewing between the medial and postmedial lines is more or less regularly rounded in *P. minna* and *P. chakri*, while that of *P. lanna* is rather quadrangular. The forewing terminal area of *P. minna* and *P. chakri* is relatively broad, suffused conspicuously with reddish-brown. This area is much narrower in *P. lanna*, sometimes hardly visible. The differences between these three species and the two taxa of the *P. thai*-group are more conspicuous, the members of the latter species-group are smaller in size with more sinuous common section of the medial and postmedial lines.

The male genitalia corroborate the close relationship of *P. minna* and *P. chakri* by their conspicuously large, medially deeply incised, apically bifurcate fultura inferior and the simple carina of the aedeagus (see above, in the diagnosis of the genus), but the dorso-lateral arms of the fultura inferior are much shorter, somewhat thicker and more arcuate in *P. minna*. In addition, the apical half of the valva of *P. minna* is somewhat narrower and more elongate than that of *P. chakri*.

The genital differences between the taxa of the *P. minna*-group and *P. lanna* are conspicuous (see above, in the diagnosis of the genus), as the latter species lacks the dorso-lateral arms of the fultura inferior and the carina of the aedeagus is armed with a large, acute, slightly arched, strongly dentate and serrate dorso-lateral extension.

Description. Wingspan: 17-19 mm, length of forewing: 8-10 mm. Head relatively

small, frons and vertex bright white. Collar, tegulae and metathorax covered with white, abdomen with brownish-white hair scales. Forewing narrow, rather quadrangular, apically rounded, costal and outer margin evenly arcuate, ventral margin almost straight. Ground colour of forewing shining porcelain white, reversed triangular patch at middle of costal third and inner part of marginal area suffused with blueish-grey scales; terminal area red-brown. Antemedial line rather broad, black, represented only by its costal part, connected by blackish, sharply defined, horizontal basal dash in a flat angle. Medial line slightly sinuous, sharply defined, angled at middle, blackish with shining blue scales at ventral margin; reniform and orbicular stigmata absent. Postmedial line blackish, rather sharply defined, upper part strongly arched, lower half fused with medial line. Upper parts of medial and postmedial lines produce a rather large, regularly rounded, bright white area. Subterminal line wavy, rather thin, finely defined with dark grey scales; terminal line evenly arcuate, fine, interrupted, greyish white followed by greyish brown arches. Cilia rather long, pale greyish brown, chequered with darker grey. Hindwing pale grey, outer margin somewhat darker, crosslines and discal spot absent. Underside of wings shining dark grey, traces of crosslines poorly visible.

Male genitalia (Figs 7, 8). Uncus relatively long, apically curved, pointed. Tegumen short, relatively broad, outer margin arcuate. Fultura inferior large, medially deeply incised, dorso-lateral arms evenly curved outwards, distally slightly tapering and apically finely rounded. Vinculum broad, saccus broadly rounded. Valva with narrower proximal and much broader distal parts, apical section broadly rounded. Harpe rather strong, sclerotized, its flattened basal plate rather narrow, apical part cuneate. Ampulla thorn-like, broad

Legends of figures

Fig. 1: *Porcellanola minna* sp. nov., female, Paratype (LGN885)
Fig. 2: *Porcellanola chakri* sp. nov., male, Holotype (LGN887)
Fig. 3: *Porcellanola lanna* sp. nov., male, Holotype (LGN881)
Fig. 4: *Porcellanola sukhothai* sp. nov., male, Holotype (LGN891)
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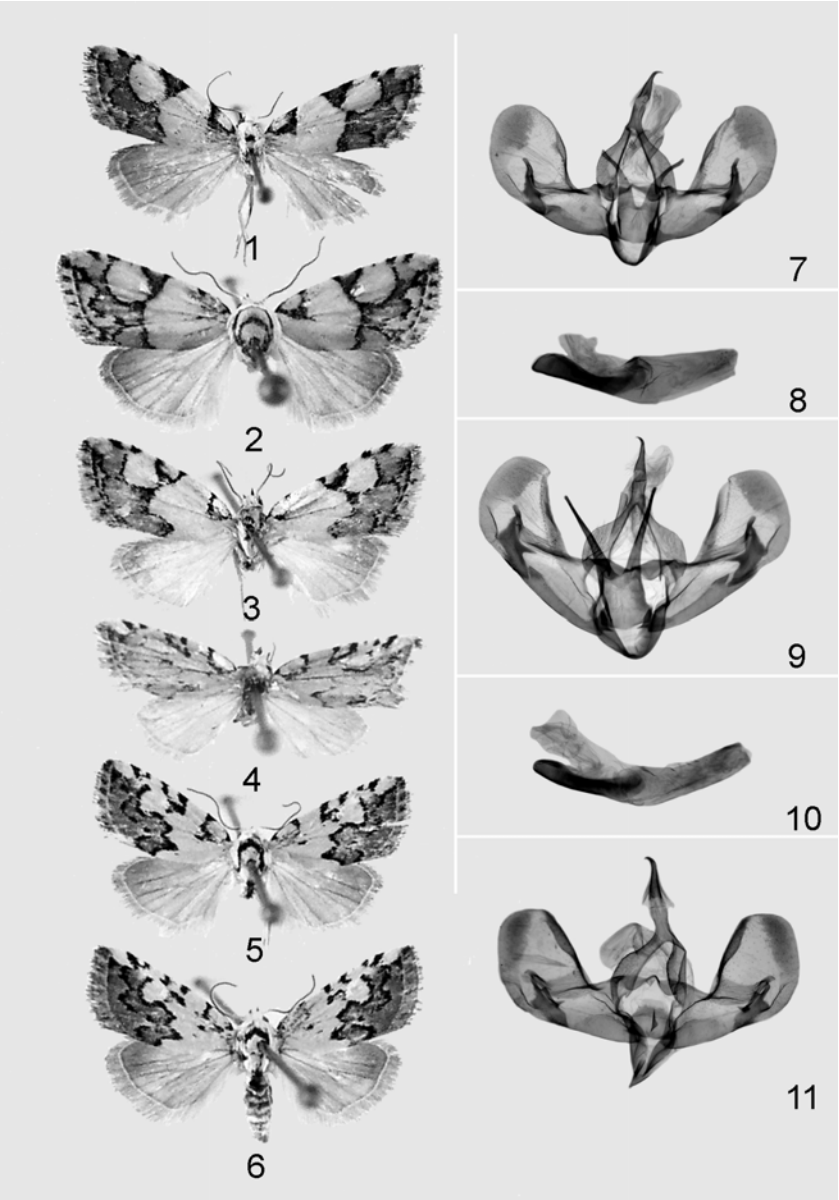

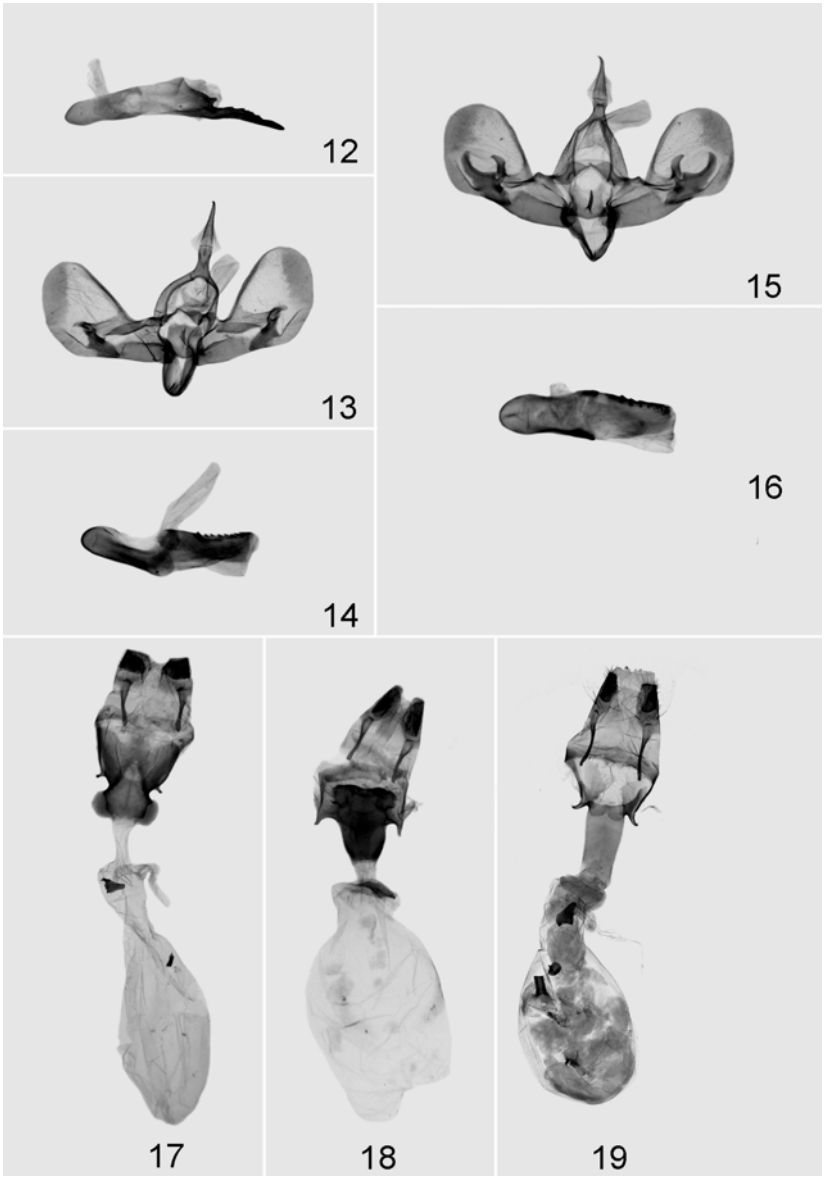

at base, then tapering, apically pointed, apical quarter curved ventrally. Aedeagus relatively short, straight, carina unspecialised; vesica without cornuti.

Female genitalia (Fig. 17). Ovipositor relatively short, papillae anales short, quadrangular; apophyses posteriores medium-long. Eighth tergite conspicuously short, ribbon-like, eighth sternite relatively large, strongly sclerotized, trapezoidal; apophyses anteriores very short. Ostium bursae strongly sclerotized, rather large, rounded quadrangular; ductus bursae medium-long, membranous, cervix bursae relatively large, weakly membranous. Corpus bursae elliptical-sacculiform, without signum.

Bionomics and distribution. The new species was collected at light in the higher parts of the northern Thai mountains in less disturbed, deciduous primary forest regions. The specimens of the type series were found in the middle of November.

Porcellanola chakri **sp. nov.** (Figs 2, 9, 10)

Holotype male: "North Thailand, prov. Chiang Mai, 1600 m, between Fang and Nor Lae, 99˚06'E, 20˚02'N, 12.11.2002, leg. B. Herczig and G. Ronkay"; slide No. LGN 887 (coll. HNHM).

Paratypes. Thailand: 1 male, with the same data as the holotype; 1 male, same site, but collected at 7.XI.2002; 1 male, Prov. Mae Hong Son, 1250 m, between Pa Pae and Khun Sa, 98˚39'E, 19˚08'N, 31.X.2002, leg. B. HERCZIG and G. RONKAY, slide LGN 880 = W 8303 (males); 1 male, Prov. Nan, 30 km E of Pua, 1700 m, 10.XI.1999, leg. M. HREBLAY, slide LGN 196 = W 8309 (coll. HNHM Budapest and Museum Witt, Munich).

Diagnosis: The differences between *P. chakri*, *P. minna* and *P. lanna* are given in the diagnosis of *P. minna*.

Description. Wingspan: 16-18,5 mm, length of forewing: 8-9,5 mm. The external appearance of the new species is very similar to that of its sister species, *P. minna*, the description of the external features is concentrated to the indication of the smaller or larger differences. Ground colour of forewing bright porcelain white, with some bluish-grey sheen at inner margin. Common part of medial and postmedial lines rather straight, running less obliquely to inner margin than in *P. minna*. Inner half of marginal area paler, less suffused with bluish-grey, subterminal line more distinct. Cilia pale greyish brown, chequered conspicuously with darker grey.

Male genitalia (Figs 9, 10). Principally similar to those of *P. minna*, fultura inferior generally larger, medially less incised, dorso-lateral arms robust, almost straight, distally slightly tapering and apically finely rounded. Valva with shorter and less broadened distal part; harpe with broader basal plate and broader, more triangular apical part; ampulla somewhat shorter and finer.

Female unknown.

Bionomics and distribution. The new species is known only from the mountains of northern Thailand, the specimens were collected at light in a medium-high deciduous forest.

Porcellanola lanna **sp. nov.** (Figs 3, 11, 12, 19)

Holotype male: "Thailand, Changwat Chiang Mai, Mt. Doi Phahompok, 18 km NW of Fang, 2100 m, 7.II.2000, leg. Hreblay & Szabó"; slide No. LGN 881 = W 8302 (MWM).

Paratypes. Thailand: 1 male, with the same data as the holotype, slide LGN 889 = W

8304; 1 male, Prov. Chiang Mai, 20 km NW of Mae Ai, 1650 m, 26.I.1999, leg. A. SZABÓ & Z. CZERE, slide No. LGN 163 = W 8305; 1 female, Prov. Chiang Mai, Mt. Doi Phahompok, 16 km NW of Fang, 2000 m, 24.II.1998, leg. M. HREBLAY & Cs. SZABÓKY, slide LGN 915 = W 8365; 2 females, 20 km NW of Fang, 2100 m, 24.I.2004; 1 female, same site, 2150 m, 22.I.2004, leg. A. SZABÓ (MWM).

Diagnosis. The differences between *P. lanna* and the externally very similar related taxa, *P. minna* and *P. chakri*, are given in the diagnosis of *P. minna*.

Description. Wingspan: 16-18 mm, length of forewing: 8-9 mm. Head relatively small, frons, vertex, collar, tegulae and metathorax covered with bright white scales; abdomen with brownish-white hair scales. Colouration and wing pattern are very similar to *P. minna* and *P. chakri*, the conspicuous costal semicircular patch of forewing filled with white scales, subterminal area brownish-grey, terminal area rather narrow, red-brown. Antemedial line and basal dah close a right angle; common part of medial and postmedial lines S-shaped, not straight; white area between upper parts of medial and postmedial lines rather large, more or less quadrangular.

Male genitalia (Figs 11, 12). Similar in type to those of the other species of the genus; fultura inferior simple, quadrangular, without dorso-lateral arms, but with fine medial crest; basal plate of harpe rather short, with fine, bar- of finger-shaped apical process; ampulla basally broad, tapering, apically pointed, ventrally curved, thorn-like. Aedeagus relatively short, almost straight, with conspicuously long, strongly sclerotized, evenly arcuate, dorsally dentate extension of the carina.

Female genitalia (Fig. 19). Ovipositor relatively short, papillae anales short, quadrangular; apophyses posteriores relatively long. Eighth tergite very short, ribbon-like, eighth sternite relatively large, strongly sclerotized, trapezoidal; apophyses anteriores short, slightly arcuate, thorn-like. Ostium bursae represented by a pair of short, double, semicircular plates forming a sclerotized, collar-like bar; ductus bursae broad, relatively long, membranous. Cervix bursae large, weak, membranous; corpus bursae elliptical-sacculiform, without signum.

Bionomics and distribution. *P. lanna* occurs sympatrically with the two related species described above. The specimens of the type series were collected in January and February at light in the high altitude decidous forest.

***Porcellanola sukhothai* sp. nov.** (Figs 4, 13, 14)

Holotype male: "Thailand, Changwat Chiang Mai, Mt. Doi Phahompok, 18 km NW of Fang, 2100 m, 15.XI.1999, leg. Márton Hreblay", slide No. LGN 891 = W 8306 (MWM).

Paratypes. Thailand: 2 males, Prov. Nan, 30 km E of Pua, 1700 m, 10.XI.1999, leg. M. HREBLAY, slide No. LGN 195 = W 8308, LGN 892=W 8307 (MWM).

Diagnosis. The new species differs from the previously described three new species by its considerably smaller size and the much finer and paler forewing crosslines. *P. sukhothai* is closely related to *P. thai*, but differs from its twin species by its somewhat smaller size, less sharply defined and much finer crosslines and the considerably paler outer third of the forewing. The male genitalia of *P. sukhothai* and *P. thai* show also remarkable differences: The fultura inferior of *P. sukhothai* is a simple, quadrangular plate, with a short medial fold, while that of P. thai is broadly incised medio-dorsally, bearing a well developed, acute ventro-medial process. In addition, the harpe-ampulla complex of *P. sukhothai* is virtually simple, consisting of a fine apical process of harpe

and a relatively short but robust, claw-like, ventrally curved ampulla, while that of *P. thai* is conspicuously bifid, having equally strong processi of harpe and ampulla forming a pincer-like structure.

Description. Wingspan: 14-15 mm, length of forewing: 7-7,5 mm. Forewing rather narrow, quadrangular, apically rounded, costal and ventral margin almost straight, outer margin evenly arcuate. Ground colour of forewing porcelain white; reversed triangular costal patch marked sharply with black, filled with white scales. Subterminal area greyish-brown, terminal area pale brown. Antemedial line fine, blackish, represented only by its costal half, angled inwards; basal dash long, very fine, dark grey. Medial line fine, dark grey, slightly sinuous, upper third sharply defined lower part pale, angled at middle. Postmedial line dark brown, upper half sharply defined, lower part pale, slightly arched. Subterminal line pale brownish grey, poorly visible; terminal line evenly arcuate, thin, interrupted, consisting of pale brown arches. Cilia rather long, pale greyish brown, chequered with darker brown. Hindwing pale brownish grey, outer margin somewhat darker, crosslines and cell spot absent. Underside of wings shining pale grey, traces of crosslines poorly visible.

Male genitalia (Figs 13, 14). The ground plan of the genital capsula is similar to that of *P. lanna*, fultura inferior simple, quadratic, with short, ventro-medial fold; harpe short, rather narrow, with fine, short apical process; ampulla robust, claw-like, curved ventrad. Aedeagus relatively short, slightly arched, carina with serrate dorso-lateral bar.

Female unknown.

Bionomics and distribution. The type series was collected by light in the primary broad-leaved forest of the high mountains of North Thailand; the flight period is mid-November.

Porcellanola thai **sp. nov.** (Figs 5, 6, 15, 16, 18)

Holotype male: “North Thailand, Prov. Mae Hong Son, 1250 m, between Pa Pae and Khun Sa, 98˚39'E, 19˚08'N, 31.10.2002, leg. B. Herczig et G. Ronkay”; slide No. LGN 888 (HNHM).

Paratypes. Thailand: 3 males, 1 female, with the same data as the holotype; 3 males, Prov. Chiang Mai, 1600 m, between Fang and Nor Lae, 99˚06'E, 20˚02'N, 12.XI.2002, leg. B. HERCZIG & G. RONKAY. Slide No. LGN 890 (male), LGN 905(female) (HNHM and MWM).

Diagnosis: The differences between *P. thai* and its closest relative *P. sukhothai* are given in the diagnosis of the previous species.

Description. Wingspan: 14-16 mm, length of forewing: 7-8 mm. Head small; frons, vertex, collar, tegulae and metathorax covered with bright white, flat scales; abdomen with brownish-white hair scales. Forewing rather narrow, elongate, apically finely pointed; costal and ventral margins almost straight, outer margin evenly arcuate. Ground colour of forewing bright porcelain white; wedge-like costal patch defined sharply with black, filled with white scales. Inner half of marginal area greyish-brown; terminal area pale brown. Antemedial line black, rather sharply defined, angled inwards above short, black basal dash. Medial line dark grey, very sharply defined; postmedial line black, upper half strongly curved, sharply defined, lower part strongly sinuous, fused with medial line. Subterminal line wavy, dark brownish grey; terminal line evenly arcuate, thin, interrupted, consisting of pale brown arches. Cilia rather long, pale greyish brown, chequered with dark brown. Hindwing pale brownish grey, outer margin somewhat darker, crosslines and

discal spot absent. Underside of wings shining pale grey, traces of crosslines poorly visible.

Male genitalia (Figs 15, 16). Ground plan of genital capsula typical of *Porcellanola*; fultura inferior quadratic with medio-apical incision and with sclerotized, spiniform, finely curved ventro-medial process. Harpe-ampulla complex strikingly bifid, with robust, curved apical processi of harpe and ampulla, basal plate of harpe short and very broad. Aedeagus and vesica as in *P. sukhothai*.

Female genitalia (Fig. 18). Ovipositor relatively short, papillae anales fine, conical; apophyses posteriores medium-long, well developed. Eighth tergite very short, ribbon-like; eighth sternite large, quadrangular, strongly sclerotized; apophyses anteriores rather short, thorn-like. Ostium bursae rather broad, medium-long, infundibular, strongly sclerotized. Ductus bursae short, membranous; cervix bursae broad, sack-like. Corpus bursae relatively large, elliptical-ovoid, with two relatively long, lateral, elongate, finely scobinate plates.

Bionomics and distribution. The new species occurs sympatrically with *P. sukhothai* in the deciduous forests of the medium high mountains of North Thailand. The specimens of the type series were collected by light in the first half of November.

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Literaturbesprechung

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Zuerst muss lobend erwähnt werden, dass es noch Verlage gibt, die beim heutigen Profitdenken solche Bücher publizieren, die wohl keinen sehr großen Verbreitungskreis haben. Bali ist zwar für sein Kultur- und Strandleben berühmt und wird von vielen Touristen jährlich besucht, aber nur die wenigsten dürften sich - ausgerechnet - für Schlangen und Frösche interessieren. Andererseits wächst in nahezu allen "tropischen" Ländern eine zunehmendes Interesse für die eigene Natur und besonders den Naturschutz heran. Und gerade für die einheimische Bevölkerung ist es wichtig, auf solche Bücher zurückgreifen zu können. Demzufolge sind zumindest die Bestimmungsschlüssel zweisprachig (Englisch, Bahasa Indonesia) gehalten. Die Einführung beschreibt - mit entsprechenden Strichzeichnungen - wie man Amphibien und Reptilien identifiziert (Fachtermini, Maße), und charakterisiert die Naturlandschaften Balis. Bisher sind 14 Froscharten und 57 Arten Landreptilien bekannt, zusätzlich einer nicht genauer bekannten Artenzahl an Seeschlangen. Die meisten dieser Arten haben eine mehr oder weniger weite Verbreitung in Südostasien, für einige bildet Bali allerdings die östliche Grenze ihres Verbreitungsgebietes.

Eine sehr informative Darstellung zu diesem Thema, die vor allem für Herpetologen von Interesse sein dürfte. R. GERSTMEIER

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