New and poorly known Chrysomelidae (Coleoptera) from the islands of Bali and Lombok (Indonesia)

Lev N. Medvedev

Abstract

Six new species and one new subspecies (Coleoptera: Chrysomelidae) from the Indonesian islands of Bali and Lombok are described: *Lema sumbawensis lomboki* **n. ssp.**, *Lema baliana* **n. sp.** (Criocerinae); *Taumacera centromaculata* **n. sp.**, *Paraplotes granulata* **n. sp.** (Galerucinae); *Hespera foveipennis* **n. sp.**, *Hespera lombokana* **n. sp.**, *Nisotra insulana* **n. sp.** (Alticinae). *Lema gestroi* Jacoby, 1884, *Trichochrysea hirta* Fabricius, 1801 and *Orthaltica laticollis* Scherer, 1971 are first recorded from these islands.

Keywords: Chrysomelidae, new species, Bali, Lombok, Indonesia.

Zusammenfassung

Sechs neue Arten und eine neue Unterart (Coleoptera: Chrysomelidae) von den indonesischen Inseln Bali und Lombok werden beschrieben: *Lema sumbawensis lomboki* **n. ssp.**, *Lema baliana* **n. sp.** (Criocerinae); *Taumacera centromaculata* **n. sp.**, *Paraplotes granulata* **n. sp.** (Galerucinae); *Hespera foveipennis* **n. sp.**, *Hespera lombokana* **n. sp.**, *Nisotra insulana* **n. sp.** (Alticinae). *Lema gestroi* Jacoby, 1884, *Trichochrysea hirta* Fabricius, 1801 und *Orthaltica laticollis* Scherer, 1971 werden zum ersten Mal für diese Inseln nachgewiesen.

Contents

1 Introduction

During a recent visit in the Staatliches Museum für Naturkunde in Stuttgart I had the opportunity to study numerous newly collected chrysomelids from the Indonesian islands Bali and Lombok. Chrysomelidae of these islands are very poorly studied and published. Hitherto only a single publication is available about the leaf-beetles of the subfamily Galerucinae from Bali (Mohamedsaid 2001); the chrysomelid beetles of Lombok remained unknown. After a detailed study of the SMNS material, six new species and one new subspecies are recognized and described herein. I take the opportunity and add three new records of chrysomelid species from these islands.

Acronyms of depositories

LM Collection of Dr. Lev Medvedev, Moscow, Russia
SMNS Staatliches Museum für Naturkunde, Stuttgart, Germany

Acknowledgements

I thank my friend Dr. Wolfgang Schawaller (SMNS) for the possibility to study this interesting material and for his hospitality during my visits in the State Natural History Museum in Stuttgart.

2 Taxonomy and distribution

2.1 Subfamily Criocerinae

Lema (Petauristes) sumbawensis lomboki **n. ssp.**

Holotype (♂): Indonesia, Lombok, Sesaot, 500 m, 1.II.1994, leg. L. Bolm, SMNS.

Paratype: Indonesia, Lombok, Senaro, N slope of Rinjani, 1100 m, 2.–5.II.1994, leg. L. Bolm, 1 ♀ LM.

Description: Body length 7.0–8.3 mm. Pronotum entirely fulvous; all other characters identical to the nominate subspecies.

Diagnosis: The nominate subspecies *L. sumbawensis* Jacoby, 1895 from Sumbawa possesses a black stripe on the base of pronotum, delimited anteriorly by the prebasal impression; it has a body length of 6.9–7.3 mm.

Lema (Lema) gestroi Jacoby, 1884

Material examined: Indonesia, Bali, Danau Buyan, 1300 m, 19.–21.II.1994, leg. L. Bolm, 2 ex. SMNS.

Remarks: Both specimens from Bali possess an entirely black apical quarter of the elytra, while the nominate *L. gestroi* Jacoby, 1884 usually has a preapical black band. However, this species, which was previously known

from Sumatra, Nias and Java, is rather variable and specimens from Sumatra in my collection (det. HEINZE) also have a black apical quarter of the elytra. *L. delauneyi* Baly, 1889, recorded from Vietnam and Thailand, may represent a junior synonym of this species.

Lema (Lema) baliana **n. sp.**

Holotype (sex not determined): Indonesia, Bali, Danau Buyan, 1300 m, 19.–21.II.1994, leg. L. BOLM, SMNS.

Paratypes: Same data as holotype, 1 ex. LM. – Indonesia, Bali, Ubud, NNE Denpasar Sayan, Yeh Ayung, 21.XI.1993, leg. PANKOW, 2 ex. SMNS.

Description: Upperside metallic blue, with 4–5 basal antennomeres which are reddish at the base or below; legs fulvous with more or less darkened tarsi; abdomen fulvous with black basal sternite. – Head as wide as pronotum, sparsely pubescent; clypeus punctuate, frontal grooves divergent in a right angle; vertex slightly convex, punctuate, with deep longitudinal groove. Antennae reach the middle of the elytra; proportions of antennomeres 10-6-10-11-16-15-14-13-13-12-15; preapical antennomeres about 2.5 times as long as wide. Pronotum 1.1 times as wide as long, constricted just behind the middle; pronotal surface with a transverse impression in the basal third; surface shining, distinctly punctuate. Scutellum triangular, impunctate. Elytra 1.65 times as long as wide, slightly narrowed posteriorly and broadly rounded at apex; elytral surface with a deep postbasal impression and regular rows of deep punctures. Body length 4.4–4.8 mm.

Diagnosis: This species is characterized by its colour pattern, which is not found in any other congener of the Indonesian fauna. *L. nilgiriensis* Jacoby, 1903 from southern India is somewhat similar concerning these characters, but differs in a distinctly punctated head and pronotum.

2.2 Subfamily Eumolpinae

Trichochrysea hirta Fabricius, 1801

Material examined: Indonesia, Lombok, Sembalun Lawang, Mt. Rinjani, 1700 m, 6.–8.II.1994, leg. L. BOLM, 1 ♂ SMNS.

Distribution: Known from Malaysia, Sumatra, Bali, Java, Nias, and Sulawesi; first record from Lombok.

2.3 Subfamily Galerucinae

Taumacera centromaculata **n. sp.** (Figs. 1, 2)

Holotype (♂): Indonesia, Bali, Danau Buyan, 1300 m, 19.–21.II.1994, leg. L. BOLM, SMNS.

Paratypes: Same data as holotype, 1 ♂ LM, 1 ♀ SMNS.

Description (♂): Fulvous, antennal segment 3 dorsally black, next antennomeres more or less darkened; pronotum with a central piceous spot confluent with a narrow stripe at anterior margin; scutellum, underside of body, tibiae and tarsi black. – Head impunctate; frontal tubercles subquadrate with acute and elongate anterior angles, bordered posteriorly by a transverse impression. Clypeus long, with longitudinal ridge. Antennae reach the apical third of elytra; proportions of antennomeres 10-2-14-7-7-8-7-7-7-8-9; segment 3 strongly thickened, about twice as long as wide, with a deep oval groove at the upper surface (Fig. 1); preapical antennomeres about 4–5 times as long as wide. Pronotum 1.35 times as wide as long, broadest in the anterior third, lateral sides slightly rounded; surface microsculptured, impunctate except a few punctures in the prebasal transverse depression. Scutellum triangular, impunctate. Elytra 1.65 times as long as wide, with a feeble basal convexity and a postbasal impression, elytral surface finely punctuate and microsculptured. Segment 1 of male anterior tarsi not widened. Aedeagus (Fig. 2) thin and long, with acute apex. Body length 6.0–6.4 mm. — (♀): Colour pattern identical, but antennal segment 3 entirely fulvous. Third antennomere simple. Body length 7.2 mm.

Diagnosis: This species belongs to the *Taumacera deusta* species-group (as defined by REID 1999) and is similar to *T. laevipennis* Jacoby, 1886 and *T. midtibialis* Mohamedsaid, 1998, but can be distinguished by a different dorsal colour pattern, a different shape of the male antennomere 3, and simple mid tibiae. MOHAMEDSAID (2001) mentioned some unnamed species of *Taumacera* Thunberg, 1814 from Bali, the new species possibly being one of them.

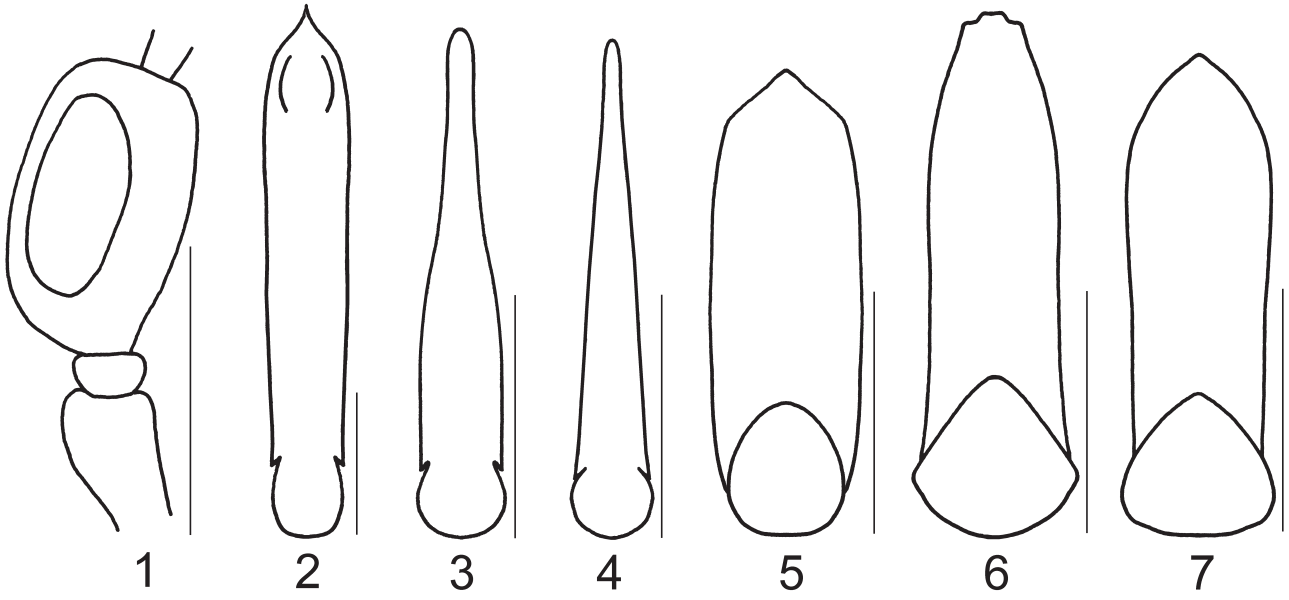
Paraplotes granulata **n. sp.**

Holotype (♀): Indonesia, Lombok, Sapit–Sembalun Bumbung, 900–1500 m, 14.–16.II.1994, leg. L. BOLM, SMNS.

Paratypes: Same data as holotype, 3 ♀♀ SMNS, 1 ♀ LM.

Description: Fulvous, antennae black with segments 1 and 2 fulvous, 10 and 11 pale flavous, but apex of segment 11 black; elytra black with a feeble bronze sheen; ventral side of body castaneous to piceous. – Head impunctate; frontal tubercles elongate triangular, with acute apices, bordered posteriorly by a sharp impressed line. Antennae reach the apical third of the elytra; proportions of antennomeres 10-2-10-8-7-7-7-8-9-8-10; preapical antennomeres about 3–4 times as long as wide. Pronotum twice as wide as long, slightly divergent anteriorly, lateral margins straight, anterior angles thickened and acute; surface shining and impunctate. Elytra 1.5 times as long as wide, broadened posteriorly; surface dull and coarsely granulate, with short dark pubescence, lateral margins sharp; epipleura impunctate, longitudinally concave. Body length 4.5–4.7 mm.

Diagnosis: The new species differs from other known species of the genus by its pale flavous apical antennomeres. *P. rugosa* Laboissière, 1933 from Vietnam is



Figs. 1–7. Basal antennomeres 1–3 (1) and aedeagi (2–7) of Indonesian Chrysomelidae. – **1**–**2**. *Taumacera centromaculata* n. sp. **3**. *Hespera foveipennis* n. sp. **4**. *H. lombokana* n. sp. **5**. *Nisotra insulana* n. sp. **6**. *N. gemella*. **7**. *N. chrysomeloides*. – Scale: 0.5 mm.

relatively similar, but *P. granulata* n. sp. is distinguished by its fulvous labrum and by its coarsely granulate elytra with metallic surface. The other known species of *Paraplotes* are described from continental Asia, except one species from Taiwan.

2.4 Subfamily Alticinae

Hespera foveipennis **n. sp.** (Fig. 3)

Holotype (♂): Indonesia, Lombok, Sembalun Lawang, Mt. Rinjani, 1700 m, 6.–8.II.1994, leg. L. Bolm, SMNS.

Paratypes: Same data as holotype, 7 ex. SMNS, 2 ex. LM.

Description: Black or piceous, elytra sometimes castaneous; labrum, antennae and legs fulvous, apical antennomeres and posterior femora darkened; pubescence of head and dorsal side of body golden, rather short. – Body elongate, slightly widened posteriorly. Head densely punctuate and microsculptured on vertex; frontal tubercles triangular, convex and microsculptured. Antennae reach the apical quarter of the elytra; proportions of antennomeres 10-5-10-12-15-13-12-11-11-10-11; preapical antennomeres about 2.5–3 times as long as wide. Pronotum 1.2 times as wide as long, lateral sides slightly rounded; pronotal surface finely and densely punctuate. Elytra 1.6 times as long as wide; elytral surface finely and densely punctuate, with very narrow interspaces; each elytron with a deep and broad impression near the middle of the lateral margin, delimited externally by a distinct fold. Last visible abdominal sternite with a deep impression. Segment 1 of male anterior tarsus feebly widened. Aedeagus (Fig. 3) cuneiform with very long and thin apical process, straight in lateral view. Body length 2.5–2.8 mm.

Diagnosis: This species is similar to *H. philippinica* L. Medvedev, 1993 from the Philippines, but differs in its distinct impression on the elytra and in its very long apical process of the aedeagus.

Hespera lombokana **n. sp.** (Fig. 4)

Holotype (♂): Indonesia, Lombok, Sapit–Sembalun Bumbung, 900–1500 m, 14.–16.II.1994, leg. L. Bolm, SMNS.

Description: Black; three basal segments of the antennae, anterior and mid legs dark fulvous; pubescence of dorsal side white. – Body elongate, parallel-sided. Head densely punctuate, pubescent and microsculptured on vertex; frontal tubercles triangular, convex, microsculptured. Antennae reach the apical third of the elytra; proportions of antennomeres 10-3-7-12-12-12-12-11-10-10-12; preapical antennomeres about 4 times as long as wide. Pronotum 1.4 times as wide as long, lateral sides very slightly rounded; pronotal surface finely and densely punctuate, with short pubescence. Elytra 1.65 times as long as wide; elytral surface without any depressions, finely and extremely densely punctuate, interspaces very narrow and not larger than punctures, surface microsculptured, and covered with short hairs which are mostly directed backwards. Last visible abdominal sternite medially with a smooth groove. Segment 1 of male anterior tarsi not widened. Aedeagus (Fig. 4) cuneiform, straight in lateral view. Body length 3.3 mm.

Diagnosis: This new species is similar to *H. nigra* Chen, 1934 from Borneo, but can be distinguished by the colour pattern and by the shape of the aedeagus.

Orthaltica laticollis Scherer, 1971

Material examined: Indonesia, Lombok, Sembalun Lawang, Mt. Rinjani, 1700 m, 6.–8.II.1994, leg. L. Bolm, 9 ex. SMNS, 2 ex. LM. – Indonesia, Lombok, Sapit–Sembalun Bumbung, 900–1500 m, 14.–16.II.1994, leg. L. Bolm, 8 ex. SMNS. – Indonesia, Bali, Danau Buyan, 1300 m, 19.–21.II.1994, leg. L. Bolm, 1 ex. SMNS.

Distribution: Originally described from Singapore. New records from Bali and Lombok.

Nisotra insulana **n. sp.** (Fig. 5)

Holotype (♂): Indonesia, Bali, Danau Buyan, 1300 m, 19.–21.II.1994, leg. L. Bolm, SMNS.

Paratypes: Same data as holotype, 19 ex. SMNS, 1 ex. LM. – Indonesia, E Lombok, Sapit, SE slope of Mt. Rinjani, 14.–16.II.1994, leg. L. Bolm, 4 ex. SMNS, 2 ex. LM.

Description: Red fulvous; six apical antennomeres and ventral side of body black, only apical abdominal sternite reddish, elytra metallic bluish green. – Body ovate. Clypeus punctuate, vertex punctuate at the sides, broadly impunctate in the middle. Antennae reach the anterior third of the elytra; proportions of antennomeres 4-3-3-3-3-4-4-4-4-4-6; preapical antennomeres about 2.2 times as long as wide. Pronotum 1.7 times as wide as long, with rounded lateral margins; surface finely and sparsely punctuate; anterior margin with a deep, sharp and long groove on each side (about $^2/_5$ of pronotum length) and with a shallower and short groove on each side of the base. Elytra 1.2 times as long as wide, with feeble humeral tubercles, densely and confusedly punctuate without rows, interspaces of punctures shining. Segment 1 of male anterior and mid tarsi moderately widened. Aedeagus as in Fig. 5. Body length 3.8–4.2 mm.

Diagnosis: Six species of this genus are as yet known from Indonesia (Kimoto 2001). *Nisotra rotundata* Jacoby, 1896 from Sumatra has a fulvous dorsal side. Both *N. chapuisi* Baly, 1876 from Java and *N. terminata* Jacoby, 1894 possess a reddish elytral apex. *N. javana* Motschulsky, 1866 from Java is a synonym of *N. gemella* Erichson, 1834 (Medvedev 2006). *N. gemella* Erichson, 1834 and *N. chrysomeloides* Jacoby, 1885, which are widely distributed in the Oriental region including Indonesia, are very similar to *N. insulana* n. sp., but can be distinguished by their irregular rows of punctures on the elytra and by different shapes of the aedeagi (Figs. 6, 7).

3 References

Kimoto, S. (2001): Check-list of Chrysomelidae of South East Asia, South of Thailand and West of Irian-Jaya of Indonesia, IX. Alticinae. – Bulletin of the Institute of comparative Studies of international Cultures and Societies, Kurume University **8**: 153–249.

Medvedev, L. N. (2006): To the knowledge of Chrysomelidae (Coleoptera) described by V. Motschulsky. – Russian entomological Journal **15**: 409–417.

Mohamedsaid, S. M. (2001): The Chrysomelid beetles of the subfamily Galerucinae from Bali, Indonesia (Coleoptera, Chrysomelidae). – Serangga **6**: 137–169.

Reid, C. (1999): Reappraisal of the genus *Taumacera* Thunberg with descriptions of two new species from South-East Asia (Coleoptera: Chrysomelidae: Galerucinae). – Australian Journal of Entomology **38** (1): 1–9.

Author's address:

Dr. Lev N. Medvedev, Severtsov Institute for Problems of Ecology and Evolution, Leninsky Prospect 33, Moscow 119071, Russia; e-mail: lev.medvedev@sevin.ru

Manuscript received: 18.IV.2007, accepted: 21.V.2007.